THE FUTURE OF
WORKING WITH WORDS

LT

LANGUAGE TECHNOLOGY
INCLUDING LANGUAGE MONTHLY
SEPTEMBER/OCTOBER #9
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TRUE, FALSE, MAYBE, NONE OF THE ABOVE,
NOT YET, AND IN ANOTHER PART OF THE FOREST.

CONTROLLED ENGLISH AND POETIC COMMON SENSE

WORDWORKING IN JAPANESE

WAPURO

COMPUTER-AIDED LANGUAGE LEARNING

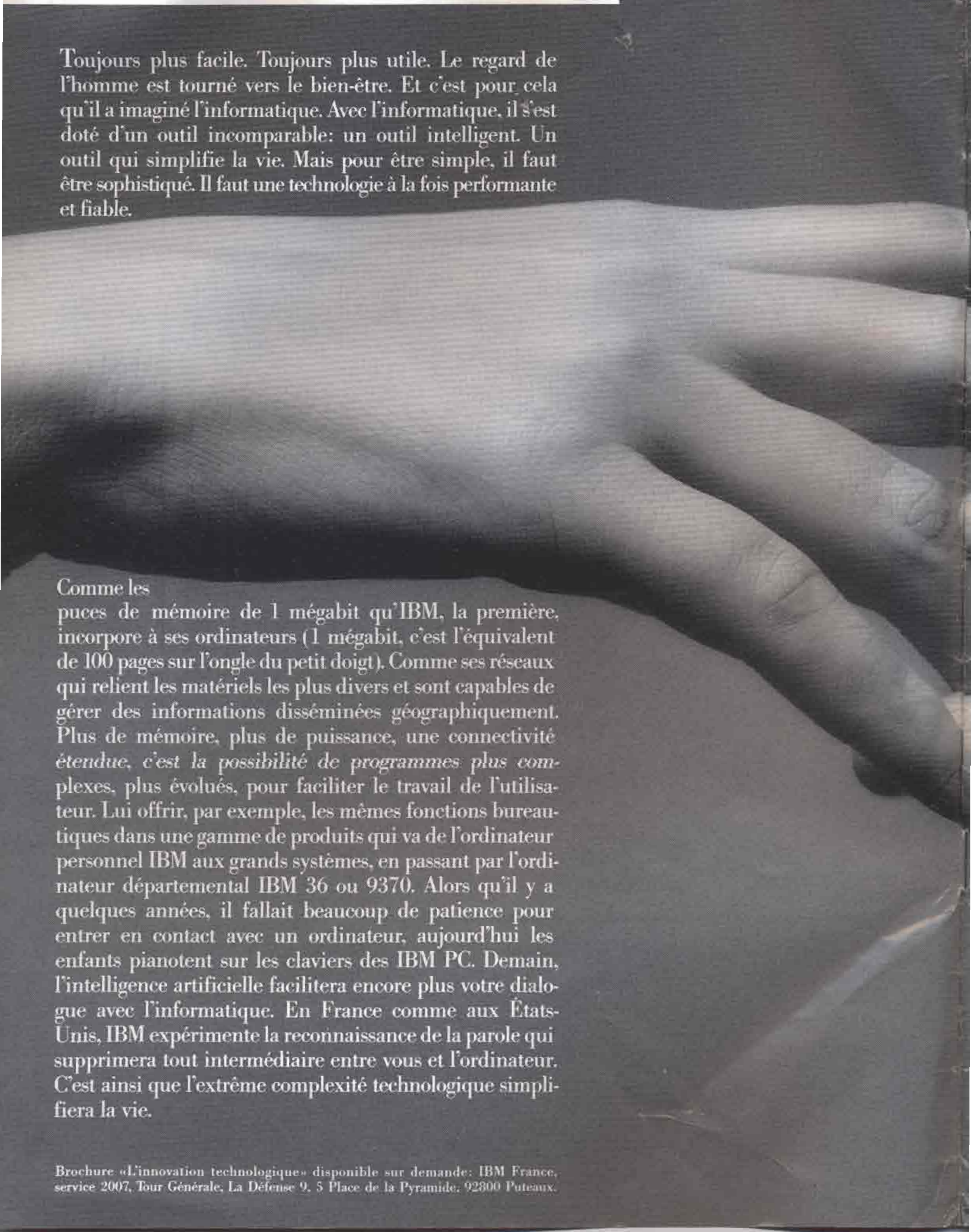
MULTISCRIPT

WORDPROCESSING

PLUS: NOTABENE'S STEVE SIEBERT

VENTURA TIPS

& WORDWORKER (?!) XAVIERA HOLLANDER

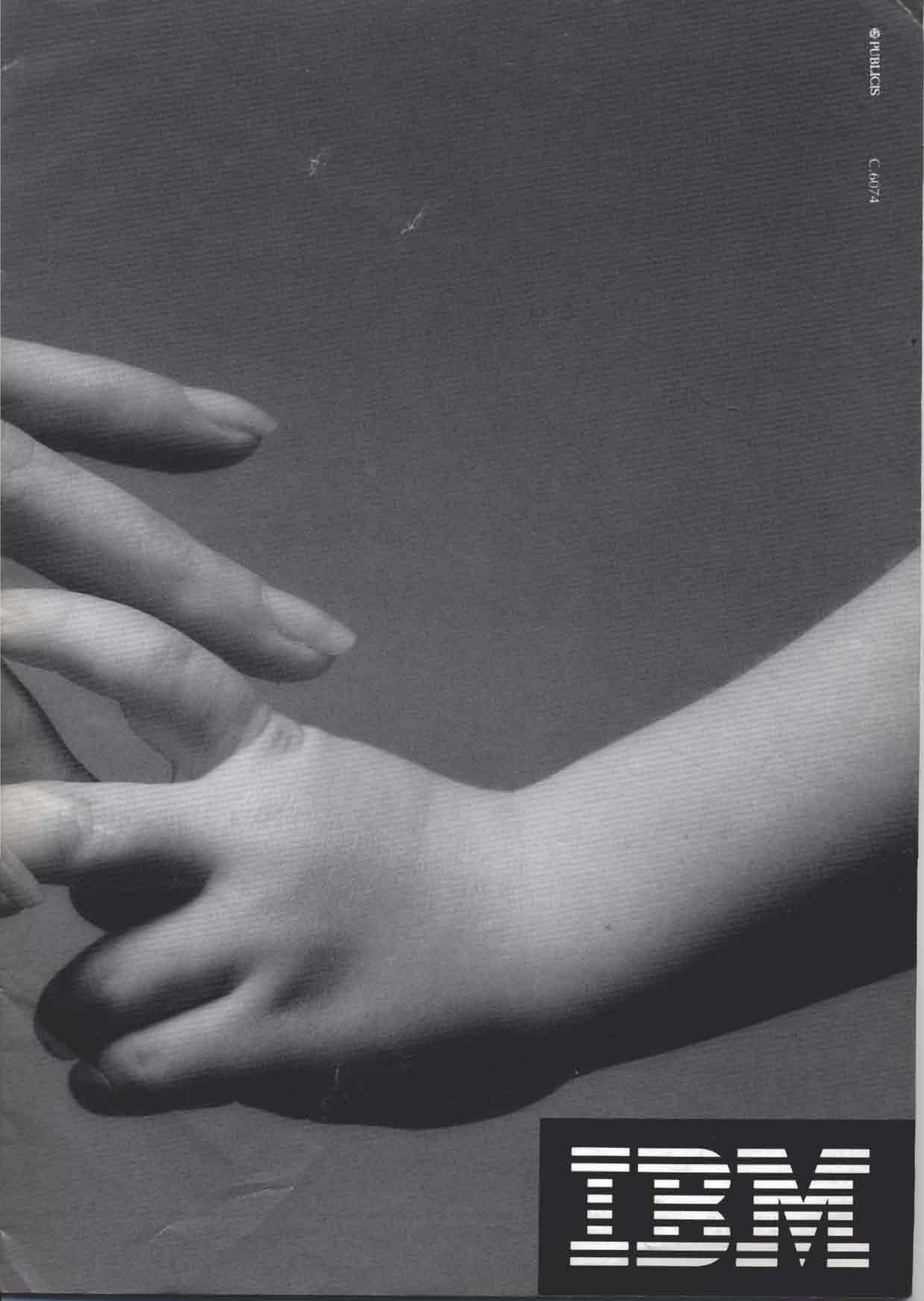


Plus nous aurons de choses à dire, plus nous les dirons simplement.

Toujours plus facile. Toujours plus utile. Le regard de l'homme est tourné vers le bien-être. Et c'est pour cela qu'il a imaginé l'informatique. Avec l'informatique, il s'est doté d'un outil incomparable: un outil intelligent. Un outil qui simplifie la vie. Mais pour être simple, il faut être sophistiqué. Il faut une technologie à la fois performante et fiable.

Comme les puces de mémoire de 1 mégabit qu'IBM, la première, incorpore à ses ordinateurs (1 mégabit, c'est l'équivalent de 100 pages sur l'ongle du petit doigt). Comme ses réseaux qui relient les matériels les plus divers et sont capables de gérer des informations disséminées géographiquement. Plus de mémoire, plus de puissance, une connectivité *étendue, c'est la possibilité de programmes plus com*plexes, plus évolués, pour faciliter le travail de l'utilisateur. Lui offrir, par exemple, les mêmes fonctions bureautiques dans une gamme de produits qui va de l'ordinateur personnel IBM aux grands systèmes, en passant par l'ordinateur départemental IBM 36 ou 9370. Alors qu'il y a quelques années, il fallait beaucoup de patience pour entrer en contact avec un ordinateur, aujourd'hui les enfants pianotent sur les claviers des IBM PC. Demain, l'intelligence artificielle facilitera encore plus votre dialogue avec l'informatique. En France comme aux États-Unis, IBM expérimente la reconnaissance de la parole qui supprimera tout intermédiaire entre vous et l'ordinateur. C'est ainsi que l'extrême complexité technologique simplifiera la vie.

Brochure «L'innovation technologique» disponible sur demande: IBM France, service 2007, Tour Générale, La Défense 9, 5 Place de la Pyramide, 92800 Puteaux.



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IBM

Instead of an Editorial: Changes

The takeover happened literally on the day we went to press, so, sorry for the delay, but this is the first chance we've had to welcome our new Language Monthly readers. We are very happy that you are with us, and we hope to live up to the trust Geoffrey Kingscott placed in us when he decided to find a new home for his editorial efforts. Geoff's influences as Contributing Editor can already be seen in most sections of the magazine, especially in the new LinguaFranca section on multilingual wordworking, the review section, and the calendar. In addition, he will be advising on editorial feature topics and contributing to the product news sections.

Our absorption of Language Monthly is the first of two major changes that occurred at LT this summer. The other was that Language Technology became an independent publication. For 18 months, LT had been published by INK International, Europe's largest translation company for high tech industries. INK started LT because it rightly saw that no publication was covering the technological revolution occurring in the language industries in which it was deeply involved. But from the outset, both INK and LT recognized that INK's main business was translating and linguistic software, not publishing, and that someday LT would have to become an independent company. That day was 1 September. LT is now on its own. We thank INK for our initial launch, and its unstinting support during our growth and evolution, and wish it well in its future endeavors.

Both events suggest that this might be a propitious moment to re-state what LT is all about. LT's mission is to inform professionals working with natural language about the rapid and profound changes occurring in their industries. Natural language is the raw material of human communication. The professionals are communicators – wordworkers – and include everybody from writers, editors and translators, to documentation managers, MIS directors and the software and hardware developers making products for them. We want to be of service – to report on and review the new tools of the trade, spot the trends, examine the companies making the changes, and spotlight people doing important work. And have a little fun while we're at it, because life is grim enough already, and, as a great philospher once put it, a spoonful of sugar helps the medicine go down.

A few words on the continuing changes occurring within the pages of LT. First, we've regretfully discontinued the Technoid section, which covered other technological innovations. As much fun as it was to put together, it was really outside our specialty. Instead, we have decided to devote the space and editorial resources to issues of direct concern to readers. As noted above, we have added a new news section called LinguaFranca to focus on multilingual issues. In addition, we have increased the size and scope of our news and book review sections. And, of course, we have a vastly expanded classified section.

We have also re-thought pricing. Until now, LT has been primarily distributed by subscription only (we are on newsstands only in the Netherlands, and then only on a few). So the cover price was set to include an average mailing cost for delivering LT to a subscriber. We now intend to start placing LT on newsstands, so we decided to adjust our prices to reflect the actual costs involved in producing LT and distributing it. As you can see, the cover price has been dropped. But we have now made explicit in the subscription price the cost of mailing. New subscribers will have the option of selecting whether they want faster or slower delivery, and pay the price or reap the savings accordingly.

Coming up next month: a look behind the doors of IBM's Watson Research Labs at Big Blue's natural language research program. Stay tuned. The fun has just begun.

—Louis Rossetto

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Four writing systems, thousands of characters, several completely different pronunciations for each character, but only ten fingers – no wonder the Japanese have been among the slowest in adapting computer technology to wordworking. Until the advent of "wapuro," that is.

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LT The Technology of Language Technology: This issue was written on IBM ATs or clones using WordPerfect 4.2 word processing program, and on Mac Pluses and IIs, using Word and Fullwrite Professional. Text was ported to the Mac usingMacLink Plus and LapLink Mac. The lay-out is generated on Mac IIs and Radius screens, using PageMaker 3.0. Designs created with Illustrator and Freehand. Scans were made on an Agfa S200 with MacScan software. Proofs were printed on an Apple Laserwriter Plus and AST Turbolaser/PS. Feature text was output on a Linotronic 100, Electric Word on a Varityper VT600. Cover image created on an Agfa S200 scanner. Headline fonts LT Wide, LT Font designed by Max Kisman and produced by Bert Hendriks on Fontographer. Varityper: GCA, Amsterdam. Linotron: Niek van Dijk, Amsterdam. Cover lithography: Scitex Response 300 Jos Neve, Amsterdam. Printing: Den Ouden, Amsterdam.

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LANGUAGE TECHNOLOGY

ELECTRIC WORD

GRAMCHECKER RIVALRY GETS TENSE

ILLUSTRATION BY RYU TAJIRI

Competent computerized proofreading is looking increasingly like reality as competition in the grammar checker field comes to life.

U.S. publisher Houghton Mifflin just announced DEC's adoption – for its VAX minicomputer range – of a checker based on the publisher's CorrecText product. And other blue pencil brigades' gauntlets are flying thick and fast too – with product announcements from Smart Communications, Reference Software, Sensible Software, and Proximity Technology. Meanwhile IBM – Its Binary Majesty – surveys the bustle below in the comfortable knowledge that its Critique grammar checker has *nothing to prove*.

"DEC's VAX Grammar Checker's parser enables it to go far beyond the capabilities now offered by spelling and style checkers," says T. Kenwood Mullare, head of Houghton Mifflin's Business Software Division. It analyzes sentences to detect common errors in syntax, idiom, punctuation, capitalization, hyphenation, and spelling – and goes on to suggest corrections.

Should a user write "the dogs is sniffling," for example, the Grammar Checker will identify the incorrect subject-verb agreement and suggest "are." And DEC claims it's just as good at spotting mistakes with irregular verb forms, pronoun cases, contractions, and plural and possessive noun forms. Similarly, it will flag such breaches of stylistic etiquette as split infinitives, wordy prepositional phrases, and long noun phrases.

Computerized proofreading rival Smart Communications, of New York – whose customized solution Max Expert Editor has been used in the automatic editing of documents on large computers since the mid-70s – "welcomes" DEC's product. Noting that Max is now also available for a large range of minis, plus the Mac II and IBM PS/2, president John Smart points out: "DEC's entry into grammar checking *makes* our market. They do the missionary work, the advertising, and the consumer education. We ride along. DEC can do us only good."

Smart compares his company to a boutique. Though his customized solution may initially seem much more expensive than off-the-rack programs such as DEC's, Smart points out: "We offer the human touch. We come in and tell the customer how to use it."

In the more modest world of the PC, the solitary standard bearer of grammar checking until this year was San Francisco-based Reference Software, with its recently released

(continued on next page)

BRAINPOWER'S ARCHITEXT

California-based Brainpower finally began shipping ArchiText on 1 August. The company is touting the program as a unique text-based tool for linguists, educators, and cognitive psychologists.

The program has three basic capabilities: text retrieval and management; onscreen display; and "read-only viewer" recording. You can analyze any kind of text from short wp documents to large database files, gain an instantaneous overview of the organization of your text, and track the behavior of your text's "viewers."

This third capability will be of particular interest to educators. "Viewers" are readers of your text whose access to and treatment of it are pre-programmed – and automatically recorded. A teacher can thus check whether his/her student has followed an agreed set of operations in studying the text.

ArchiText is available for the Apple Macintosh and requires about 400 Kb of memory. Price: US$349.95.

Brainpower, Inc., 24009 Ventura Blvd., Calabases, CA 91302, USA. Tel: +1 (818) 884 6911.

CARNEGIE MELLON SPEAKER INDEPENDENT SPEECH RECOGNITION

Computer scientists at Pittsburgh's Carnegie Mellon University have developed a speech recognition system that tackles several of the field's knottiest problems. Called Sphinx, the system recently attained a word accuracy rate of 96 percent on a 997-word resource management task.

According to Sphinx developer Dr. Kai Fu Lee, three major problems in the development of a speech recognition system are: making the system speaker-independent; getting it to deal with continuous speech; and enabling it to make use of a large vocabulary.

In a dissertation on Sphinx, Lee writes that no other speech recognizer today can handle all three difficulties simultaneously. The developer compares and contrasts Sphinx with a number of other speech recognizers.

Two systems similar to Sphinx, according to Lee, are Angel and SRI. Angel attained 45.5 percent word accuracy, SRI 43.6 percent. Only a number of speaker-dependent systems, such as Hearsay, Spicos and Harpy, attained word accuracy of up to 97%.

Sphinx is based on four principles. It uses a "sophisticated yet tractable" speech model. It incorporates human speech knowledge. It utilizes speech units that are "trainable, well-understood, and context-insensitive." And it can adapt to individual speakers.

As a result, Sphinx will

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GRAMCHECKER (CONT.)

Grammatik III, designed to serve either as a standalone program or OEM product integrated into wordprocessors.

However, newcomers are elbowing their way into the field. Sensible Software of Troy, Michigan, has launched Sensible Grammar for the Macintosh, while Reference Software itself is starting work on both a Mac version of Grammatik III as well as one for Unix. "The Mac version will be ready in January next year, the Unix version in two months."

This was news to Sensible Software president Chuck Hardley: "The market for grammar checkers is tough enough as it is. Spelling checkers became popular because they're either right or wrong," said Hardley. "Grammar checkers are harder to sell. The user often has to think about their suggestions. That makes them less popular."

Another company soon to enter the grammar-checking fray – in both micro and mini environments – is Proximity Technology of Fort Lauderdale, Florida. Its product is scheduled for release this autumn. Proximity's lips are sealed, but when asked whether DEC's VAX Grammar Checker will be a rival, a spokeswoman flatly admitted: "Yes it will be."

IBM's Critique grammar checker could, if the gigaconcern so chose, be a serious contender at all levels of the computer market. It functions competently, as LT has itself been privileged to witness. Yet, Critique is still being coddled behind the locked doors of IBM's research centers.

IBM personnel already use it, say Natural Language Group researchers at the Thomas J. Watson Research Center, Hawthorne, New York. "And they're happy with it," says George Heidorn, the group's manager.

For the time being, though, it seems that DEC will have the general purpose off-the-rack mini market to itself. The VAX Grammar Checker will be available by the end of October. Pricing will start at US$570.

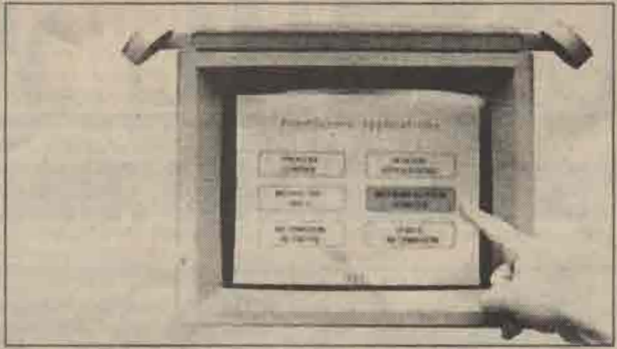
CARNEGIE (CONT.)

understand rapidly spoken sentences as well as respond to any user's voice. Sphinx has been tested in three modes, using three different grammars of varying complexities.

Examples of wrong recognition by Sphinx are rare, but there is one that shows how important for future uses it is that a speech recognizer be error-free. The question "How many cruisers that are sqq-23-capable are there at Bombay?" was recognized as "How many cruisers that AREN'T sqq-23-capable are there at Bombay?"

The example gives a clue as to who's backing Sphinx, at least part of the way: the Defense Advanced Research Projects Agency. They see Sphinx as a likely candidate for use in voice-controlled systems in military aircraft.

However, if the system is ever to translate spontaneous spoken language, Lee and his team will first have to boost its vocabulary from 997 words to 20,000.



DON'T TOUCH ME THERE

Vermont-based Contaq Technologies Corp. is poised to launch its answer to touch-sensitive screens: "PointScreen." This ultrasonic sensor device keeps discreet track of where you've been sticking your finger – as long as it's within 1 cm of the screen, that is. The information is relayed to your processor in ASCII format via an RS232 port.

PointScreen can be mounted on screens with a diagonal length of 22 to 66 cm. Unlike most touch-sensitive screens, it does not require direct physical contact with the screen, thus avoiding scratching and dirt accumulation. Traditional overlays also often obscure the image somewhat. Since PointScreen is mounted above and not in front of the screen, this problem doesn't arise.

Contaq hopes to sell the product not only as an add-on to existing systems, but also as an OEM product – one that's incorporated into another product as a standard part. The whole package – hardware, a software driver, and several demo and training programs – sells for US$695.

Contaq Technologies Corporation, 15 Main Street, Bristol, VT 05443, U.S.A. Tel: +1 (802) 453 3332 / Mr. Joseph Santilli, American Technology International, 51 rue de la Vanne, 92120 Montrouge, France. Tel: +33 (1) 46 57 69 04.

PROOFREADING BY EAR

Monologue, from CSSL Inc., converts onscreen text into speech output – an automatic proofreading assistant. Monologue reads your text or spreadsheet aloud while you check the printed output for accuracy.

Monologue is both hardware and software. The terminate-and-stay-resident (TSR) software converts English text and numbers into phonetic characters. These are then transferred to a D/A conversion box, where they are turned into analog speech.

Monologue comes with earphones, so you can proof without background noise, and an adapter that allows your printer and Monologue to work simultaneously. Both these items plug into your computer's parallel port.

CSSL claims that Monologue will work with any program that has a text mode.' Product manager David Seifert says the product is smart enough to read "$123.95" as "one hundred twenty-three dollars and ninety-five cents." He also says it reads punctuation. You can adjust Monologue's speed, volume, and sex – it'll give you bass or treble voice.

Price: $189.95. Requirements: DOS 2.1, 256 Kb of RAM, and a parallel port.

CSSL Inc., 909 Electric Ave., Seal Beach, CA 90740, U.S.A. Tel: +1 (213) 493 2471.

ASK SAM

AskSam is a full text retrieval program with extensive report and hypertext capabilities, and an automatic phone dialer. It's easy and fast to use, says its maker. You just put all your documents into one AskSam file, and there's no indexing.

Customers so far have included lawyers, screen writers, and a lexicologist preparing an English-Chinese dictionary. And AskSam vice-president Mike McInney is quick to point out that his is the retrieval program used by the U.S. Senate in managing the transscripts of the Iran-Contra hearings ("Find all Col. North's references to Israel").

As well as English, AskSam is now available in German and planned for release in French.

AskSam Systems Corp., P.O. Box 1428, Perry, FL 32347, U.S.A. Tel: +1 (904) 584 6590.

BEND ME SHAPE ME

Two new font design programs for the Mac are due this autumn: Letraset's Letrastudio and Compugraphic's Font Manager.

LetraStudio will let you vary the size of your onscreen type from one to 999 points (nearly 14 inches). You can distort it, give it perspective, slant it, change its height, even turn it upside down. You can also edit fonts down one pixel at a time, select half-tone templates, adjust letter or word spacing, vary the weight of strokes, fill a font or shadow with colors, use Pantone colors, and string text along the inside or outside of any polygon or bezier curve. Font Manager will provides editable screen fonts in sizes ranging from 9 to 127 points. And it will allow you to create any size type from any available font, no matter how many fonts are already in your System Folder.

LetraStudio is to list for "under US$400," with two typefaces. Font Manager will cost US$100 and include four typefaces.

Letraset Corp., 40 Eisenhower Drive, Paramus, NJ 07653, U.S.A. Tel: +1(201) 845 6100

Compugraphic Inc., 200 Ballardvale St., Wilmington, MA 01887, U.S.A. Tel: +1 (617) 658 5600

INTERNATIONAL SCAN

"The worldwide market for scanners is growing hotter each day," says Denise Widman, announcing the launch of Houghton Mifflin's OCR support package International CorrectScan. And Dest Corp.'s Chris Kenber is looking worldwide too: "Adding multilingual capability to our scanners enhances our ability to sell in the international marketplace."

Dest Corp. is offering multilingual OCR software for its PC Scan range of desktop scanners. Continental characters? Apparently *kein großes Problem* with German Text Pac, German Publish Pac, and International Publish Pac.

German Text Pac reads German character sets – common daisywheel and typewriter fonts, draft mode dot matrix and some laser printer fonts – and lets you import scanned text straight into your wp document. Text Pac is compatible with major wordprocessing packages running on PC/compatibles.

German Publish Pac combines OCR with image recognition, and has German language help screens and documentation. Running under Microsoft Windows, it includes the image editor PC Paintbrush and can be used with major DTP programs.

International Publish Pac is its counterpart for Scandinavian characters as well as German and English. And Dest is also testing French, Italian, and Spanish versions of both Text Pac and Publish Pac. Software prices range between $700 and $800. Dest PC Scan scanners are priced between $3000 and $3300.

Meanwhile, Boston-based publisher Houghton Mifflin is offering International CorrectScan (ICScan) to other producers as an enhancement to their OCR software. Its purpose: to improve scanning accuracy. When an OCR program cannot distinguish one or more characters within a word, it will invoke ICScan. The module will check the word against a language specific database and determine the most likely correct choice.

ICScan is available for both US and UK English, German, French, Dutch, and Swedish – with Spanish and Italian under development. Houghton Mifflin claims it can be used in any OCR system, and that one OEM licensee has so far been found.

Houghton Mifflin Co., 1 Beacon St., Boston, MA 02108, U.S.A. Tel: +1 (617) 725 5000.

Dest Corp., 1201 Cadillac Court, Milpitas, CA 95035, USA. Tel: +1 (408) 946 7100. In Europe: Weerdestein 206, 1083 GN Amsterdam, The Netherlands. Tel: +31 (20) 440 966.

LOW COST DIP WORKSTATION

HyperMedia 2.0 is an archival and retrieval system for images as well as text and numeric/date data, and includes hypertext capabilities. It's made by Turin-based HyperSystems Srl. and distributed in Italy by IBM Italia.

Its full-text retrieval component comes with automatic document ranking based on relevance to individual queries. It also lets you create links between text and image as well as hypertext links between documents.

HyperMedia's most distinctive quality, says HyperSystems, is its support of all MS-DOS-driven storage media, including CD-ROM and WORM disks, most networks, 26 different video adapters, and various printers and scanners.

As a result – claims R&D director Giovanni M. Sacco – individual users can build their own document image processing workstation at a fraction of the cost of a dedicated solution such as Philips MegaDoc or Kodak KIMS. HyperMedia's ability to interface with WORM jukebox servers makes it an especially powerful tool.

The program runs under MS-DOS 3.3 on PC/compatibles with at least 640 of RAM, a harddisk or WORM disk drive, and an IBM Image Support Facility 2. Price: 3,500,000 lira (US$2480).

HyperSystems Srl, Via Duchessa Jolanda 21, 10138 Torino, Italy. Tel: +39 (11) 404 1245 / Fax: +39 (11) 650 8381.

VDTs – ARE THEY TERMINAL?

ILLUSTRATION BY RYU TAJIRI

With a threefold increase in the worldwide use of VDTs (visual display terminals) forecast for the next three years, speculation is mounting about their effect on users' health. Some scientists now firmly believe that the non-ionizing radiation emitted by VDTs is medically harmful, though there is still no hard evidence on its effect on humans.

In June this year, local legislators in Suffolk County, New York, passed the first-ever law controlling the use of VDTs. The European Commission is considering similar legislation. But mere control will not protect computer-using workers from the radiation that VDTs emit as pulses of a very low frequency electromagnetic field.

The Suffolk law, which imposes a 15-minute break every three hours for employees who use a VDT for more than 26 hours a week, focuses particularly on ergonomic problems related to use, such as eyestrain and musculoskeletal disorders.

Dr. James Sheedy, of the VDT Eye Clinic, Berkeley, California, recently reported an unusually large number of patients, all VDT users, having problems focusing their eyes. Other studies have also noted that the more an office worker works at a VDT, the more health complaints s/he has – and the less job satisfaction.

But regulations such as those now in force in Suffolk County do not cover radiation risk. A much-publicized study by the Kaiser Permanent Medical Care Program, of Oakland, California, published this June, found that the chance of miscarriage in women working more than 20 hours a week at VDTs was twice as high as in other women. The most likely cause is widely believed to be radiation.

Another study published in June, financed by the U.S. Office of Naval Research, stated that a significant increase in abnormalities had been diagnosed in chicken embryos exposed to the same type of radiation as VDTs emit.

Still, scientists are unanimous — conclusive proof about the biological effect, if any, of VDT's on humans is lacking. Further study will be needed.

Kaiser researcher Dr. Robert Hiatt, commented that while the study certainly *revealed a link between VDT* use and miscarriage, the probability of a pregnant VDT user suffering a miscarriage is still remote.

To put things in their true perspective, he told an UPI reporter: "It's nothing like the relationship between smoking and lung cancer."And he added that the use of alcohol and tobacco by pregnant women produces a risk of miscarriage "slightly greater" than VDT use.

Some comfort. Can we look forward to the doomladen warning on the side of the box: "VDT use by pregnant women may result in fetal injury, premature birth, and low birth weight?" — **Peter Rutten**

FAST HYPERCARD LOOK-UP FOR CD-ROM

KnowledgeSet, of Mountain View, California, brags its search-and-retrieval program for HyperCard stacks, HyperKRS, due out in September, will beat HyperCard's Find procedure into a cocked hat. "I've yet to see one of our searches that takes more than a few seconds," says marketing director Chris Bowman, asked how long it'll take HyperKRS to search a 500 Mb database.

HyperCard, Bill Atkinson's one-year-old program enabling ordinary Macintosh users to develop their own Mac applications, stores information in a file structure called a "stack." A stack consists of one or more "cards," containing text and images related in a way that the individual user or commercial publisher has specified. To find information in a stack, you activate HyperCard's Find procedure, which then scours all the cards for it. Although fast – one HyperCard reviewer claimed he found a word located on the last card of 5 Mb of text within four seconds – Bowman claims it's "inadequate for very large stacks."

HyperCard applications on CD-ROM, for instance, are expected to feature mammoth stacks. Bowman says HyperKRS can search even a 500 Mb stack in a few seconds, making it a very fast interface for large databases, CD-ROM, and "stackware." He promises it will "lift HyperCard to a new era."

Thanks to HyperKRS, he claims, HyperCard is close to becoming a standard for CD-ROM applications. The DOS world still hasn't decided on a CD-ROM standard and has to settle for custom-built applications for each set of data. But HyperKRS provides a generic search and retrieval interface for all HyperCard stacks.

The HyperKRS package consists of two parts: the search-and-retrieval software interface, and a part called HyperIndexer. The interface allows customization of the menu and lets you apply a variety of search-and-retrieve operations, including Boolean ones (AND, OR, BUT NOT) and "incomplete phrases."

HyperIndexer indexes the HyperCard data at a speed of about 5 Mb per hour. The user can specify "stop words" – not to be included in the index. After indexing, the data can be mastered onto a CD-ROM disk.

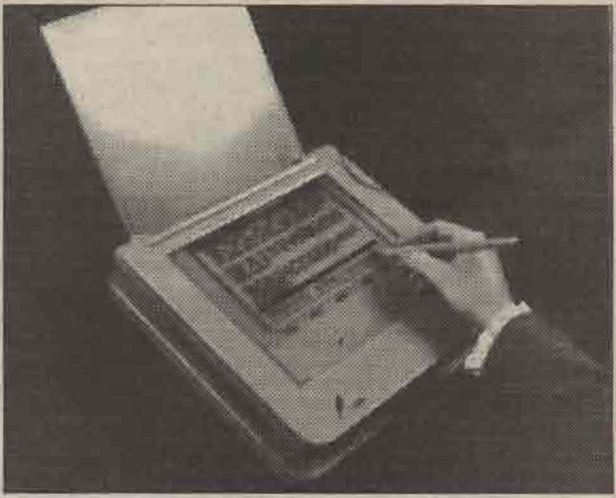
Should data first be retrieved from another database, a "little routine" in HyperTalk will take care of possible conversion problems, says Bowden. HyperTalk is HyperCard's easy programming language.

"Most conversions are fairly straightforward," says Bowman. Conversion of Microsoft Word or MacWrite data will take place automatically through a filter. Bowman also foresees the emergence of a new type of small firm – consultancies specializing in the conversion of company databases into stacks.

HyperKRS is to be marketed through advertising and put on the vertical market through value added retailers. A development starter package, containing one copy of the indexer and one copy of the search-and-retrieval system, costs US$790. Publishers will pay US$30 for each replica of the system they produce.

KnowledgeSet doesn't plan to build a generic interface for MS-DOS or OS/2, since no consistent database format exists on these operating systems. But the company does plan to sell its search-and-retrieval engine to MS-DOS and OS/2 software developers for use in CD-ROM applications. Desktop publishing programs, such as Ventura or PageMaker, could then be used as a frontend for the database engine, said Bowman.

Knowledge Set, 888 Villa Stt., Suite 500, Mountain View, CA 94041. Tel. (415) 968-9888.



BACK TO HANDWRITING

Counter-revolution in inputland? Linus Technologies, of Reston, Virginia, has launched a laptop without a keyboard. Instead of typing input, you write it – just like back in the old days.

But before you hurl yourself under a cold shower, look again. There's nothing backward-looking about Linus. What you write on, using a pen-like stylus, is a glass screen. The computer then converts your handwritten characters into ASCII code.

Linus Technologies calls its invention Write-top. The first model, shipped in July, accepts handwritten alphanumeric data, signatures, scientific symbols, and hand-drawn sketches. Says the company: "The stylus replaces the need for either keyboard or mouse."

The input screen weighs 1 1/2 kilos. It's attached to a three-kilo system unit that you can strap over your shoulder, or place under a seat. A nurse, for instance, recording information about a patient while standing beside the bed, can handwrite data on the Write-top and download it later to a PC. Linus hopes the machine will appeal especially to executives who can't or won't learn to type.

Write-top owes its existence to two technologies: a transparent digitizer, which overlays a flatpanel display, and a symbol recognition algorithm. The digitizer allows for writing on the display as if it were paper. The algorithm recognizes written characters and converts them into ASCII.

Linus says you need about 30 minutes to teach the computer several versions of your personal alphabet – a neat version, for example, and a sloppy one. The company claims the algorithm can recognize several variations. The machine comes with a word processor, called Just-Write, and a software development kit,CodeWrite.

Linus intends to distribute Write-top through value-added dealers and retailers. The former will distribute Linus, with Just-Write, "to text-intensive offices." The latter are to develop vertical-market applications with CodeWrite, and distribute these to markets such as health care, insurance, and finance.

Linus is IBM-compatible and boasts 640K of memory. It has a 3 1/2 inch diskdrive, an optional modem, serial and parallel ports, and – for those who prefer to type – a port for an external keyboard.

Linus Technolgies, 1889 Preston White Dr., Reston, VA 22091 U.S.A. Tel. +1 (703) 476-1500.

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at our Amsterdam office + (3120) 850.551

WHAT ELSE CAN YOU SAY?

If your sick of botching your reports for the corpurate directer, think about getting Comment 2.0 and Spelling Coach Professional, two new programs for the Macintosh from Deneba.

The first, Comment 2.0, is a MultiFinder compatible program of the word-memo-graphics-data-all-in-one variety. Your mouse can nibble away at spreadsheets, wordprocessing, and desktop publishing, as well as managing your notes and calendar. Attach notes to spreadsheets or wordprocessing documents, and you can create an integrated package.

Time Alarms – a feature new to the 2.0 version – adds the fourth dimension to your notes and appointments. Call up notes hourly, monthly, or even yearly. Comment means one less excuse for missed deadlines.

Spelling Coach Professional, installed as a desk accessory on the Mac, is more than your typical online spelling program. It provides you with complete definitions, hyphenation, uses, and tenses of 85,000 English words as interpreted by the Merriam Webster Concise dictionary. Interactively, you can look up words as you're working or you can use Spelling Coach Professional to check the spelling on a completed document.

Your quest for the *mot juste* may be just a mouseclick away. The thesaurus function with 245,000 synonyms is divided into meaning groups, with definitions for the different usages. Supplementary medical, legal, and geographical dictionaries supplement this package.

You can have Comment for US$99.95, and Spelling Coach Professional for US$195.

Deneba Software, 5855 N.W. 12th Street, Suite 202, Miami, FL 33125, U.S.A. Tel: +1 (305) 594-6965.

NEWS NOTES

EUROPEAN PARC

Europe now has its own Parc (Palo Alto Research Center). On 16 June, Rank Xerox's opened EuroParc in Cambridge, UK. The lab will be researching human-computer interaction.

POSTSCRIPT-STYLE INTERPRETER

LaserGo, San Diego, California, has introduced a PostScript-style interpreter that will allow applications such as Pagemaker and Word to produce PostScript-quality documents on most laser printers. LaserGo sends PostScript instructions to GoScript, which processes the commands, creates a bitmapped image, and sends it to the printer.

HANDHELD SCANNER

Logitech, Fremont CA, announces a 200 dpi handheld scanner for IBM PC, AT, XT and PS/2, called ScanMan. It adds non-computer graphics – photos, articles, drawings etc. – to documents including those from Logitech, Pagemaker, and Ventura. ScanMan has a four-inch scanning window and scans images up to 4 by 11 inches.

PC READS MAC FILES

The Copy II PC Deluxe Option Board, from Central Point Software Inc., Portland, Oregon, allows a PC to read and write Macintosh data diskettes. The board is claimed to transform a PC's internal 3.5-inch drive into a dual-purpose Mac/IBM-compatible drive. Central Point says PCs and Macs can thus share data quickly and cheaply.

WINDOWS 2.1

Version 2.1 of Windows/286 has been announced by Microsoft, Redmond, Washington. The new version has been designed for 80286-based systems such as the IBM AT, though it will also run on 8088- or 8086-based systems. 2.1 makes Excel run 20 to 100 times faster and Pagemaker 20 to 70.

PROFESSIONAL WRITE 2.0

The Software Publishing Corp., Mountain View, California, has upgraded Professional Write. Version 2.0 reads and writes 13 different file formats and converts documents easily into any one of them. It also claims to make choosing fonts and document retrieval effortless.

CHAMPAGNE

Marketing Graphics Inc., Glen Allen, Virginia, has begun shipping Publisher's PicturePak for WordPerfect 5.0 and for InSet and HiJaak. PicturePak is a clip-art library of 565 business-related pictures. One of them is a champagne bottle with the cork popping out.

NEW IBM PRINTER

A high-speed, medium-duty, 24-wire printer, capable of producing true letter-quality text and graphics – that's the new Quickwriter Printer, so says IBM. Draft speed is 330 cps, letter-quality speed 110 cps. The printer can dispense letters and envelopes in sequential order and works in five pitches. It has eight resident fonts.

SEE ME, HEAR ME

Hear the pronunciation of a word and see the accent and intonation wave shapes on your screen. That's SoundDictionary, a CD-ROM disc containing 1333 common English words, 2600 examples of usage, and a voice track. Tokyo's Denki University and Japanese company TEAC have developed the system and are testing it at a Japanese high school.

ELECTRONIC FILOFAX

Daatafax, a personal organizer by Kempston Data, Milton Keynes, U.K., is now available for PC/compatibles. It generates Filofax-compatible pages using prepunched paper, and it includes a diary, phonebook, notepad, and a calendar. Daatafax runs under Digital Research's Gem wp and it can import graphics from Gem Paint.

MORE

A new software package for the Mac by Symantec Corp., Cupertino, California: MORE II, a planning, writing, and presentation program. It features an outliner that organizes ideas and information, a word processor and enhanced presentation graphics.

EVEN MORE

Another Symantec program for the Mac: InBox 3.0, an electronic mail package featuring simplified installation, personal information management capabilities ("Show me all my friends in Australia?" - LT), editing functions, and a new message center architecture that can run on Mac file servers.

LEGEND

After a six-week delay, NBI, Boulder, Colorado, has started shipping Legend, a document processing program combining advanced wordprocessing, desktop publishing and graphics capabilities all in one package. It runs on IBM 286/386 PCs and compatibles under Microsoft Windows.

MANUSCRIPT 2.0

Lotus Development Corp., Boston, Massachusetts, is shipping Manuscript 2.0, with new features: dynamic linking of spreadsheet data to documents; 220,000 synonym thesaurus; keyboard macros; extensive onscreen help; and menu-driven markers for incorporating graphics, worksheet data and equations.

PC VOICE MAIL SYSTEM PRICE SLASHED

Massachusetts-based Watson Natural MicroSystems has slashed the price of its Watson voice mail station from US$498 to US$199. This PC system includes auto speed-dial, auto answer, message forwarding, and a built-in 300/1200 bps modem.

POCKET ADDRESS BOOK

Channelmark Corp., San Mateo, California, is offering its diskette-based Power Address Book for US$69.96. The program holds up to 2,000 addresses, with ten sorting options and four print formats – for the Channelmark hardcopy address book, Rolodex, mailing labels, and envelopes.

ONE HI-REZ, TWO CHEAP SCANNERS

New scanners at opposite ends of the sprectrum demonstrate the strides being made in scanner technology.

DataSweep 1, from Colorado-based Soricon Corp., is a wand-shaped handheld scanner that reads characters as you sweep it along lines of typed or printed text. Soricon claims DataSweep will read 120 words per minute, with an accuracy rate of 99.3 percent. It's compatible with most wordprocessing, spreadsheet, database, and DTP programs. The character reader comes with an interface board and OCR software. It runs under DOS 2.1 or higher, on PC compatibles with at least 256 Kb of RAM and a fullsize expansion slot. Price: $1250.

DeskScan 2000 is made by Chinon, Inc., of Torrance, California. This three-kilo desktop scanner, resembling an overhead projector, reads images on a page placed face-up at its base. It operates in normal room light, so you don't need to cover your page, and you can demarcate sections of a page to be scanned. DeskScan 2000 bitmaps an image at 200 dpi in 12 seconds and can double as a fax in combination with Quadram's JT Faxcard. It has drivers for PageMaker, Ventura, and most popular graphics packages. OCR software is promised for Comdex Fall this November. It costs $659.

Meanwhile, West German Agfa Gevaert is shipping its high-quality Focus range of flatbed 800 dpi scanners for DTP use. Selling at from $4190 to $5700, at present only image processing software is available – for Mac, PC compatible, and PS/2 micros. However, Agfa promises to upgrade its Focus software with OCR capability. Release date will be announced this October.

Soricon Corp., 4725 Walnut St., Boulder, CO 80301, USA Tel: +1 (303) 440 2800.

Chinon America, Inc., 660 Maple Ave., Torrance, CA 90503, USA Tel: +1 (213) 533 0274.

Agfa Gevaert GmbH, 5090 Leverkusen, F.R.G. Tel: +49 (214) 301.

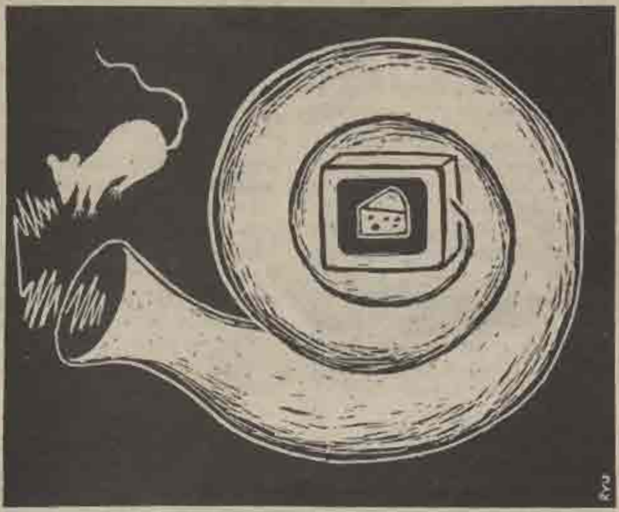

ILLUSTRATION BY RYU TAJIRI

SILICON COCHLEA = 100% VOICE RECOGNITION?

Votan Corp., maker of the TeleCenter voice-mail system, is claiming a new breakthrough in speech recognition.

A Votan team, consisting of a physicist, neurobiologist, and the company's founder and chief scientist Stephen P. Gill, have devised a silicon model of the human cochlea, the cavity inside the ear that processes sound waves and converts them into nerve impulses. Gill claims that this simulation should enable computers to attain the magic 100% accuracy in speech recognition.

There are two big stumbling blocks in automated speech recognition development: distinguishing word separation in a continuous speech flow; and attaining speaker-independence – that is recognizing dialectal and ideolectal variations of the same language.

As well as TeleCenter, Fremont, California-based Votan has developed such speech recognition products as Voice Entry, which lets users give spoken answers to voice-mail prompts on the telephone, and a number of customized industrial applications.

In the manufacturing environment, spoken input is especially useful in production and inventory control. Instead of constantly having to stop the production line to make a note on a key-´or clipboard, the headset-clad, Votan-aided quality controller can enter findings orally into a computer with no interruption. Industrial customers include U.S. General Electric and U.K. carmaker Austin Rover.

Gill says that he expects it will take a year to build the new technique into a finished system.

Votan Corp., 4487 Technology Drive, Fremont, CA 94538, U.S.A. Tel: +1 (415) 490 7600

A LA CARTE STYLECHECKER

UK technical writers' monthly The Manual is so fond of Readability that it's offering its readers the PC-compatible stylechecker at a 10% discount.

First released for English in February 1988, Readability is unpretentious – no parsing, no discourse analysis – yet with the unique feature that it compares your writing to nine preprogrammed styles, from "newspaper article" and "novel" to "advertising copy" and "bureaucratic gobbledygook." Then it tells you how closely your own style approximates each of the nine yardsticks.

Based on the work of linguist Edmond H. Weiss, author of "The Writing System" (1982), Readability was originally developed for the Swedish language by mathematician Roland Larsen. German, French, and Spanish versions are currently also being developed.

The program analyzes text for sentence length, word length, and ratios of rare to common words. It also comments on word choice and offers suggestions on how you can improve your style.

The Manual's Gordon Roberts said Readability "will enable any author to study his writing style objectively, with the aim of improving his professional writing skills and expertise." And producer Scandinavian PC Systems reasonably proclaims its suitability for teaching writing in secondary schools.

Ominously, though, Scandinavian goes on to claim: "It can also be used to analyze the styles of great writers." LT readers will recognize this early symptom of delusions of grandeur.

Price: UK£49 + VAT (US$82).

Scandinavian PC Systems, P.O. Box 5004, 35005 Vaxjoe, Sweden. Tel: +46 (470) 221 40 / P.O. Box 215, Uxbridge, Mddx., UB10 8TG, U.K. Tel: +44 (895) 679 366

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S⊖FT NEWS

WordPerfect for the Mac is already more perfect with the release of its first update, WordPerfect 1.0.1, only four months after its initial release. WordPerfect says it increases speed "dramatically" . . . Borland's **Sprint** wordprocessor is finally out in the American market, marketed as "habit compatible" since its interface can be configured to mimic WordPerfect, WordStar, Microsoft Word, Multimate, SideKick, FinalWord II, and EMACS. A "portable," non habit-compatible version is being bundled free with Toshiba's new 1200 T1200FB laptop . . . Apple's newest version of its **Mac Operating System**, Version 6, has a macro maker to create keyboard equivalents of mouse and keyboard actions, as well as assign or reassign keyboard commands, automate opening and closing folders, launch applications, open files, or record lengthy amounts of text. It has an easy-to-use interface that looks like a tape recorder with keys for record, play, store, load and erase . . . **Steve Jobs'** NeXT Inc. is rumored to have been commissioned by IBM to create a user interface for IBM's AIX implementation of Unix — to provide IBM with an alternative to the Open Look user interface proposed for Unix by AT&T and Sun . . . CompareRite 2.0 is out, now compatible with MS Word 4.0 and DisplayWrite IV . . . Digital Research has a new **DOS work-alike** operating system called DR DOS. Claim to fame: big harddisk partitions — up to 512 megs — and online help for every utility . . . the new WriteNow 2.0 can finally import and export MacWrite, Word, Write and Works files . . . WordStar for the Mac is on its way . . . **WordPerfect Office**, a network product offering users E-mail, a calendar, and common scheduling facilities, due momentarily . . . Vuman's **Vuwriter** multilingual wordprocessor becomes PageMaker capable in October . . . **Prodigy**, the Sears/IBM startup online info service, scores a big new ad client: K Mart . . . **Nouvel Observateur** opens a Minitel clone in New York called Aline, featuring live conversation, electronic messages, games, horoscopes, classifieds, and a link to French videotext services . . . Dr. John Ousterhout of UC Berkeley receives a multi-million grant for a five year study of managing **"massive amounts" of information** on today's computer systems . . . New media delivery system: get a **newspaper out of your fax** every morning from Philadelphia's US Fax (send them a fax at 215/496-9251) for 50 cents a day . . . Market researcher Dataquest predicts that by 1992 the **dedicated wordprocessor** will be a thing of the past, superseded by more versatile hardware – at least in America. US sales of wordprocessors peaked at US$1.6 billion in 1984, but slumped last year to US$124 million. Over the same period, sales of general purpose PCs rose from US$6.5 billion to US$11.6 billion . . . Finally, lighten up: if you've got a software limerick, send it to Jeff Tartar's **Software Limerick** Contest at 1679 Massachusetts Ave., Cambridge MA 02138. Winner receives a trophy and a T-shirt with the limerick on it.

INTRODUCING LT'S NEW LINGUAFRANCA SECTION, FOCUSING SPECIFICALLY ON WORDWORKING IN MORE THAN ONE LANGUAGE

JAPANESE WP RIVAL

Anato no pasucon wa eigo ga dekimasuka? Japanese who write English and Anglophones who write Japanese, listen up. Self-effacingly named Just Systems has just released Duet, a wordprocessing program for the NEC PC-9801 series, featuring advanced features in both languages – and online Jap-Eng and Eng-Jap dictionaries.

In a market that has traditionally offered products good in one language or the other, but never in both, Duet is a welcome debutante. Duet's Japanese wordprocessing functions are similar to the market leader Ichitaro. Fancy English functions like proportional printing, hyphenation, justification, wordwrap and spellchecking complement the Japanese capabilities.

Duet's really big news is its 40,000-word (14 Mb) two-way dictionary, which you install on your harddisk and whose search results you paste directly into your document. This feature is an alltime first for Just System.

Despite the close similarities, Duet files are not compatible with those of Ichitaro. The combined price of wordprocessor and dictionary is 148,000 yen (US$1,115).

Just Systems Corp., 3-46 Okihama-Higashi, Tokushima 770, Japan.

TRANSLATION ON COMPUSERVE

Since 10 July, US translation company TII Translation Services has been offering its services online worldwide via CompuServe's Electronic Mail. CompuServe is the fourth electronic mail system via which TII can be accessed. The others are Western Union's Easylink, Delphi, and ITT's Update.

The company also markets its own range of PC-compatible CAT software, the Translating Word Processor (TWP). And four new languages are being added to it, says general manager Tim Rowe – Portuguese, Italian, Dutch, and Chinese.

TII Translation Services, which recently moved from Vienna to Fairfax, both in Virginia, is a subsidiary of Infotechnology Inc., a diversified information services company based in New York City.

DE-CHOMSKYFICATION

AND OTHER NEWS FROM THIS YEAR'S COLING CONFAB ON COMPUTATIONAL LINGUISTICS

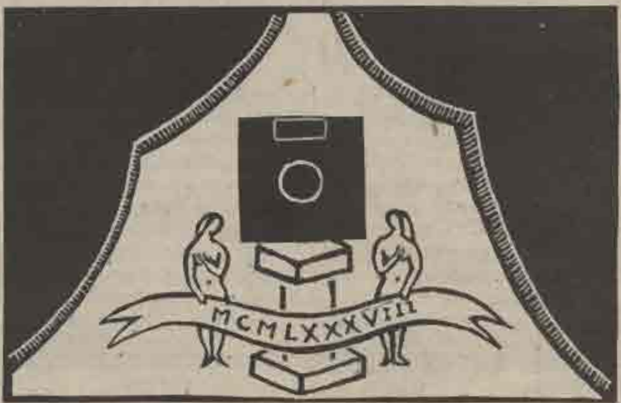
Linguistics is just beginning to recover from the Chomskyan revolution. Thirty years after Noam Chomsky's *Syntactic Structures* and the birth of generative grammar, skepticism over syntactic formalism is on its way back in the worldwide linguistic community.

Thus spake Prague University's Professor Sgall at the Twelfth International Biannual Conference on Computational Linguistics, COLING 88 (Budapest, 22-27 August). Semantics had been neglected long enough, said Sgall. Eclecticism, non-linguistic statistical models, and methods derived from the engineering disciplines all had an essential role in the computational description of language.

The conference had 500 participants from 35 countries, 85% academics, with a commercial contingent including IBM, Philips, BSO, and a number of Japanese concerns. Some 150 papers were presented, machine translation was the single most widely discussed topic, and far from all opinions expressed were unreservedly optimistic.

COLING chairman Martin Kay warned of the effects of scale when proceeding from a prototype to the production phase. MT guiding light Makoto Nagao sounded pessimistic: "Nobody knows how to organize a large body of knowledge for MT."

On a more positive note, Brigham Young University's Alan Melby called for the drawing-up of a common benchmark for MT systems in time for the next COLING conference, to be held in Helsinki in 1990.



CAN CALL SAVE LATIN?

U.K. Latin teacher Terry Bird and maths colleague Pete Sanders have developed a CALL tutorial product that they claim can turn learning Latin vocab, declensions, and conjugations from "dull" to "riveting."

The product, called simply "Latin," is aimed at candidates for the new 16+ all-ability GCSE exam in England and Wales. It consists of three main components, covering general lexis, noun cases, and verb forms.

The lexical component contains an official examining board wordlist, in which vocabulary is sorted on word class. You can test your knowledge of word meanings – first through a multiple choice test, and then through a follow-up exercise where you fill in Latin equivalents to English words.

The case and verb form components test you by means of fill-in and translation exercises. All noun declensions and verb conjugations are covered, and there are separate sections on irregular verbs sum, possum, eo, volo, and nolo.

Unfortunately, the product is only available for the BBC B machine, produced by Olivetti's ailing U.K. offshoot Acorn Ltd. Together with Research Machines Ltd. (RML), Acorn enjoys a government-imposed duopoly in the sceptered isle's educational market – a state of affairs bitterly resented by many U.K. teachers, including Sanders and Bird.

All the same, Sanders and Bird are hoping their product will do its bit to halt falling interest in the classics, the benefits of which, Bird claims, are as relevant today as ever: "The logical word training involved in Latin is an excellent preparation for computer programming – better than maths." He adds: "The head of IBM U.K., incidentally, is a classicist."

"Latin" costs UK£20 plus UK£1.25 postage (US$35.70).

Info: Pete Sanders, 2 Lyngham Ct., Crouch Hill, London N4 4AB, U.K. / Terry Bird, 158 Norwich Rd., Ipswich, Suffolk IP 1 2PT, U.K.

LEXPERTISE

When Utah-based ALP Systems Inc. made its big move away from linguistic software and into translation services early this year, the company's European-based sales and marketing executives Brett Newbold and Mike Anobile promptly left the company.

In July, with six other ex-ALPSers in tow, the duo founded Lexpertise Linguistic Software, operating out of Neuchâtel, Switzerland and currently funded by several Swiss concerns to the tune of "some three million Swiss francs."

Lexpertise also acquired ALPS's unwanted "low-end" products MacProof, MicProof, UBS Proof (a stylechecker for Germans writing in English, designed for the Union Bank of Switzerland), and ABC Word and all its dictionaries, plus the basic grammar checker technology of a never released product called ITSAGC.

In September, Lexpertise will relaunch MacProof in the UK. In November, it plans a worldwide launch for MicProof – a renamed version of ALP's old "PC Proof," a name it may not bear owing to its existing use in the US. Most of the company's marketing will be done through third parties.

Lexpertise's R&D personnel are all distinguished ALPS alumni and include the developers of Mobydic, ALPS's Eureka project, and of ITSAGC, the grammar checker ALPS started developing for internal use at IBM.

Newbold says this braindrain was part of the deal Lexpertise made with ALPS, and

(continued on next page)

FASTEST LOOK-UP PROGRAM?

Oppenweiler, F.R.G.-based Chris Blowers, whose six-person Software and Translation company has produced Superlex, claims it's faster than either Termex or INK Text-Tools, and for ease of use leaves Profilex dropping its jaw.

Superlex is a memory-resident glossary-look-up program developed in Turbo Pascal. It enables the translator to create up to ten *main dictionaries*, each supporting one source language with four corresponding target languages. The dictionaries are also each subdivided into nine 66,000-entry *glossaries* – thus enabling the translator to create separate wordlists for different clients or subjects. Optimum result: a total of 360 two-way wordlists.

The company itself is preparing basic wordlists to get the translator started. So far, German-English and French-English have been written – with plans for Dutch and Scandinavian in the near future.

Menu-driven Superlex is unbeatable for userfriendliness, claims Blowers. A window module enables the user to access glossaries and choose language directions, and a forthcoming upgrade will allow the direct addition of new entries via the window. Entries are looked up and cut-and-pasted via hot keys.

Superlex can be used with all popular wp programs for PC/compatibles. For speed, a harddisk is advisable. Price: DM645 excluding VAT ($340).

Info: Chris Blowers Software and Translation, Hauptstr. 79, 7155 Oppenweiler, FRG Tel: +49 (7191) 448 13.

LEXPERTISE (CONT.)

strongly contradicts rumors that former ALPS employees had to promise not to develop linguistic software. "We were free to hire any former or present ALPS employee," Anobile says.

Lexpertise's ambitious plans include developing several writing products, including an ITSAGC-based "true grammar checker," by which Newbold means "one that parses the sentence, tries to understand what the writer meant to say, and make corrections accordingly." Grammar checkers and UBS Proof versions for all the major European languages, plus UBS Proof for Japanese and Hindi, are also planned.

— Peter Rutten

1992, AND ALL THAT

The latest in fun-time language industries marketing beanos: the language fair – with multilingual knees-ups planned for Germany, Spain, Switzerland, Portugal, and the UK both this year and next.

Their prototype is the Brussels Bourse des Langues, started ten years ago by the Belgian Centre d'Animation des Langues, a language-training organization dedicated to getting Walloons and Flemings off each other's throats and into one another's tongues.

The Bourse was first imitated in February this year by the Paris Expolangues fair, now planned as an annual jamboree to cover all aspects of the language industries from MT to training. And a similar event is due to follow in Frankfurt 16-20 November: Expolingua – organized in association with Karl Baddé of Where and How, the international language training directory.

Baddé also has a hand in Mondolingua, an "international fair for language and cultures," planned for Geneva 26-30 April 1989 – not to be confused with Mundilingua, scheduled for Barcelona 7-9 October this year. He has nothing at all, however, to do with Portugal's first language fair, to be held 27-29 September, called Expolingua like its German counterpart.

Even the English, Europe's last-stand monoglots, are getting in on the act. Exhibitor Ron Brush, convinced the language industries have big market potential, has booked the Barbican Centre for the first London Language Show in June 1989.

With a view to avoiding clashes of events, exhibitors have formed the International Association of Language Fair Organizers, headed by Jean-Pierre Gaillex, of the Bourse des Langues.

MONDOGLOSSO

William I. Bertsche is selling his New York family business, the oldest commercial translation company in the United States. Dating back to 1908, the Lawyers and Merchants' Translation Bureau has a turnover of "slightly less than half a million dollars a year"... **Randall Woolcott Services Ltd.**, of Gerrards Cross, U.K., one of the world's largest translation agencies, has acquired London-based Translagency... At a June symposium for scientists and terminologists in Amsterdam, Kurt L. Loening of the **U.S. Chemical Abstracts Service** condemned the neglect of terminology in science and technology. One chemical company, he said, had witlessly listed the same chemical under two separate names, triphenylbenzylphosphonium chloride and benzyltriphenylphosponium chloride, at different prices. The Chemical Nomenclature and Terminological Science symposium was sponsored by **Topterm**, an Amsterdam-based terminology consultancy... **Translation company Lexi-tech Inc.**, Moncton, New Brunswick, Canada, has installed US$2 million worth of hardware and software from Digital Equipment, IBM, Interleaf Canada, and Logos, thus integrating its translation, graphics, and printing activities. With 50 employees, Lexi-tech is bidding for major government translation contracts between English and French... **Princeton Technical Translations Corp.** of East Windsor, New Jersey, announces AM-PM Service, an "automatic computerized translation service designed to provide immediate translation of short documents, including telexes, etc." from French, German, and Spanish into English. PTTC claims it uses "one of the most sophisticated translation systems on the market"... Ex-Logos employee and MT expert Peter Wheeler has started **Antler Translation Services**, Sparta, New Jersey. The company will offer Logos translation plus inhouse postediting of major West European languages and "traditional translation" of others... **Snow Lion Publications**, Ithaca, New York, has produced a Tibetan font for Apple Macintosh computers. The Tibetan script is based on Sanskrit... **Manchester, U.K.-based Vuman's** Vuwriter multilingual wordprocessor becomes PageMaker-capable in October... **Locomotive Software Ltd.**, Dorking, U.K., is now shipping six "other language" versions of Locoscript 2 for the Amstrad PCW: French, German, Welsh, Spanish, Italian – and American... The U.K. Science and Engineering Research Council has granted **UMIST's Centre for Computational Linguistics**, Manchester, three bursaries for EC students following its unique M.Sc. course in machine translation... With growth in translation volume in bilingual Wales currently 12% per year and increasing, UMIST's Prof. Juan Sager has started work on an English-Welsh MT program ... **Bill C-72**, promoting the status and use of official languages in Canada – bilingualism – has been passed in Ottawa, with only nine voting against... In Spain, **Spanish, Catalan, and Basque translators'** organizations are to discuss federation. This was decided at a special joint conference held in Madrid in July, where better training facilities such as specialized university translation and interpreting departments, were also called for... The **Singaporean government** is stepping up its support for Malay/Bahasa, southeast Asia's most widespread lingua franca and the official language of 150 million Indonesians and Malaysians. A Malay language and culture month is to be held once every two years to promote the correct usage of Bahasa. The move is aimed at countering Bahasa's Mickey Mouse image among the island state's majority – but falling birth rate – Chinese... The **Schlegel-Tieck Prize**, worth UK£1,500, awarded annually for the best translation of a German book into English, has gone to Ralph Mannheim for his translation of Günter Grass's "The Rat," published by Secker and Warburg. The judges' decision was unanimous. Mannheim was praised for "the way in which the atmosphere and style of the original had been conveyed over the course of a long narrative." **Ralph Mannheim** has twice previously won the prize, in 1966 and 1979. Runner-up, winning UK£500, was Michael Hofman, for his translation of the "The Double Bass," by Patrick Suskind, published by Hamish Hamilton... **Aldus Corp.**, Seattle, Washington, has released Kanji PageMaker 2.0 in Japan. It integrates both Japanese and English text and graphics. The Japanese version accommodates Japanese paper sizes, measurement units, and translations of menus and screen messages... Dr. David N. Wood, acting director of the **British Library Document Supply Centre**, has been elected chairman of the International Translations Center (ITC). ITC is an OECD-funded organization whose aim is to prevent the du plication of translating effort by collecting, processing and disse minating information on exiting translations in all fields of science and technology. The ITC publishes Journals In Translation, which lists 1121 worldwide journals containing translations, and the **World Translation Index**, a database and hardcopy publication, containing 280,000 references. Info: Mickey Risseeuw, Schuttersveld 2, 2611 WE Delft, The Netherlands. Tel: +31 (151) 422 42.

YOU WIN SOME . . .

Dear Editor:

I have instructed my bank to send you a cheque and look forward to receiving the entire collection of Language Technology.

I love the magazine. I first came across a few copies at work (I am at present working as a translator at Aérospatiale Toulouse) and devoured them cover to cover. Ever since I worked for a while for TAO in Toulouse, I have been extremely interested in machine translation and related areas, and I intend to go some way along this path myself (computer and linguistic studies . . .)

What I would like to see more of: practical info on future trends, study/career path possibilities, the actual principals behind the various MT products already marketed, how to make the most of a "kit" (if you think you've got one!!), i.e. traps to avoid, copyright and protection, the best way to go about it, etc.

Keep it up and thanks in advance.

John Pimm,
Toulouse

. . . YOU LOSE SOME

In early July, LT absorbed Language Monthly magazine. Of LM's 1,200 ex-subscribers, ten sent letters protesting the difference between the two magazines. This is one of them.

Dear Editor:

Thank you for sending me your latest copy of Language Technology as a replacement for Language Monthly. I use the word "replacement" after some deliberation, as I can see no trace of the latter magazine in your publication, even though "NOW INCLUDING LANGUAGE MONTHLY" is joyfully emblazoned in red on your front cover.

Indeed, throughout the magazine there are very few references to language at all: one two-page article on the machine translation of Chinese, one three-page article on Logos, and one column on ALPS. The remainder is a computer magazine pure and simple, written in the most appallingly transatlantic cliché-ridden style, with an "editorial" full of exclusively American gossip in a sub-O-level-standard English more commonly found in trendy leftwing London listings magazines.

Where is the news of international language conferences? British and European translation news? The extensive calendar of language events? Forthcoming language broadcasts? Book reviews? Sorry, I've just realized I missed those. They've been renamed "Hard Copy Review" (Does that mean that Foyle's will be renamed "The World's Greatest Hard Copy Shop?").

Despite the purported internationalism of the list of contributors, the magazine is strongly American-based. Yet even if we accept this unpleasant fact without protest, it seems a little strange that there is no mention here at all of what the magazine would term "the ongoing US translation scene." Or indeed of any ongoing translation scene, or language teaching scene, or international interpreting . . . the list of disappointments is too long to give in detail.

In short, I strongly resent being sent an American computer magazine instead of the interesting and enjoyable language journal that I used to receive. In the unlikely event that I actually wanted to read about CDs, videotex, hypertext, and RenderMan (to list the first four articles in order), I would read New Scientist, which at least writes about technical matters articulately and intelligently.

Jane Mountford
Brixton Estate PLC,
London

BITEXT – THE CONTINUING STORY

Tore Fauske replied in Language Monthly #56 to an article by Brian Harris on "Bitext," featured in LM #54 (and summarized in LT #7.) Here's Harris's reply:

Dear Editor:

I'm glad Tore Fauske finds that for him translating is "something which is not really complicated at all." That's as it should be. Translating is a skill, and the longer you exercise a skill the more easily it comes to you, and the less you have to think as you perform about what goes into it, until you do indeed reach a stage where there's "all this going on, and me being totally unaware of it."

However, that doesn't mean that translating is simple if you stop to analyze it. In fact, there's a well-worn quotation from I.A. Richards: "We have here indeed what may very well be the most complex type of event yet produced in the evolution of the universe." I wouldn't go quite so far as that myself. Other mental tasks seem just as complex as translation to me – composing this letter for instance.

Nevertheless, I do think translating is not only complex but marvelous. First, it's generally considered that human language is one of the crowning products of evolution. A second marvel is bilingualism, the ability to learn two or more languages and switch from one to another without getting them mixed up very often. To cap it all, there's the third marvel of being able to transfer messages which may themselves be highly complex from one language to another and with relatively little loss in the process.

Perhaps if people thought more about that, they would appreciate translation and translators better.

Brian Harris
University of Ottawa
School of Translators
and Interpreters
Ottawa, Canada

MORE BITEXT ... WELL DONE, LM!

Dear Editor:

Harris's Bitext (LM #54) is an important concept. It points the way to new methods for professional translation practice, and serves to promote the craft of translation to a level of technical support commensurate with today's personal computer power and new methods of text-handling such as hypertext, likely to become a very popular software product.

Until now, there has been a great shortage of bilingual machine-readable corpuses. A dramatic systematic growth of these would be beneficial for translators themselves as well as for the language industries (dictionary publishers, software developers).

Besides, the ideas on storage, retrieval, and presentation communicated by Harris (hypertext-bitext, aligned interlinear bitext) promise better chances to analyze the work of human translators and derive knowledge from it for the improved construction of semi-automatic systems.

I'm glad Language Monthly does not merely address the classical pen-and-paper translators. The magazine provides an excellent forum for exchange of ideas and opinions between human translators and language teachers on the one hand and the developers of new tools, the "language technologists" with their teaching or translations machines, on the other.

Toon Witkam
BSO B.V..
Utrecht, Netherlands

GROSS COUNTERATTACKS

Dear Editor:

I found it pretty funny to be dismissed as a mere "human translator" and "profound academic lecturer" by Ralph Dessau in his recent letter [in LT#7]. People in the computer translation field really ought to get their goals straight if they want their systems to work. Will they really be serving a "huge market of monolingual users," as DLT (short for dolt?) claimed in its first ad?

If users think DOS was bad, wait till they see what they'll have to cope with on that one – nothing less than the entire word vs. meaning debate of several millennia just to translate a single business letter. Could this be the reason DLT pulled the text in the very next issue? And either we'll be able to translate Shakespeare and Moliere one day, or we won't. Mr. Dessau wants it both ways.

My bet is that we'll neither be able nor willing, and that even if we succeeded in creating a machine that purported to do so, it would turn out to be a sterile, kludgy, dedicated dodo before it finished Act 1 Scene 1 of either playwright. Some problems are not that easy to solve. Fully Automatic High Quality Translation just may be among them.

I'm disappointed by LT's May-June issue. You are once again headed inexorably into the valley of hype as you breathlessly present every latest program as the be-all and solve-all of language, linguistics, and life itself. Yet many of these products have been around for some time without registering any noticeable change in the earth's orbit. I can get up there and hype with the best of them. But there's one basic rule: don't hype yourself! Even with a 300% hype factor, computers are still the best thing around. But when it gets up to 500%, a few necessary market changes may be in order.

Alex Gross,
Chairperson of the Machine Translation Committee of the New York Circle of Translators
New York

SCHANDALIG!

Dear Editor:

Could someone please explain to me why Elsevier appears to be ignoring the existence of the Dutch language in its most recent multilanguage dictionaries. The Dictionary of Medicine series in five languages does not include Dutch, nor does the new Dictionary of Road Transport, which would have been the answer to many of my daily translation problems had it done so.

I sincerely hope that the Elsevier Publishing Company is not planning to continue this alarming trend, or we Dutch language translators will find ourselves with no up-to-date specialized dictionaries.

Jane Meijlink
Rockanje, Netherlands.

THE NEWMARK CONTROVERSY

In Language Monthly #57 (June 1988), the last issue before its merger with LT, Geoffrey Kingscott wrote a detailed and controversial review of Peter Newmark's "A Textbook of Translation" (Prentice Hall, Hemel Hempstead, Herts., U.K., 1988). Newmark replied in a 3,000-odd-byte letter, of which we include these extracts:

Dear Editor:

I am interested in and not dismissive of "run of the mill texts." I deal with two or three of them in Part II. I accept the importance of MT, but not having processed text myself yet, I am not competent to discuss it. I *do* state (p.197) that ALPAC's famous decision was "that MT had no future." I would not want to give a history of MT, as you suggest, but I agree that students have to be prepared for the "physical" processes of translating, and that is another book . . .

I have a bee in my bonnet about accuracy and the literal truth, not literal translation . . . Moreover, all the particular problems of translation arise in places where you do not or cannot translate literally, but still want to translate as accurately as possible. That is mainly what I write about.

I deny that I want translators to be the "eunuchs of language." My form of "semantic" translation requires imagination and sheer common sense. But the great majority of translated texts are informative or persuasive, and have to sound natural and be well written. I have written out many times against what you call "unimaginative Internationalspeak." I hate it as much as you do.

I hope no student of translation is going to have my book "imposed" on him. I write forcefully, but not dogmatically. I could quote much in my book to support this . . . "Translation is for discussion." And I thank you for your challenging review.

Peter Newmark

N E W S P E A K

"There's as much distinction between one word processor and one desktop publishing program as between one word processor and another word processor. It's not a different species; it's more a matter of the company's positioning. It's the distinction between Lotus 1-2-3 and VisiCalc. They're not a different species, they're different generations, different versions, different visions."

Phil Florence, *chief architect for word processing products at Ashton-Tate, on the vanishing distinction between wordprocessing and desktop publishing.*

"I see newspapers up to 10-point type by the end of the century, even 13-point for some magazine articles. Everybody likes big type. It's a trend."

Roger Black, *the US designer who set the style for a generation of American magazines with his work on Rolling Stone, Newsweek, Outside and others.*

"On the most general level, software doesn't do enough, and what it does do is too difficult to use. In other words, there are islands of success in a sea of frustration. There's no software yet for people who work with ideas and items of information, the way there are spreadsheets for people who work with numbers. Everybody I know gets frustrated with their PC at one time or another. At least twice a week I want to throw the whole machine through the window. That's a sure sign that we haven't reached a fine level of sophistication in software. I don't think that fact is take into account by most people in the industry."

Mitch Kapor, *inventor of Lotus 1-2-3 and founder of the new On-Technology, a company to explore new directions in software, commenting on the sorry state of computing today.*

"By the end of the century, 60 percent of Europe's workforce will work in or be dependent upon communications and information technology. World trade in these areas is currently $650 billion. How much of it can Europe win in the face of competition from the US, Japan and Southeast Asia? Consider that Europe today spends 0.39 percent of gross domestic product, 0.51 in Japan and 0.62 in the United States."

Michael Hardy, *of the European Commission of the European Community, speaking at the opening of the UK Rank Xerox research facility in Cambridge, EuroPARC.*

"There are approximately 174,500 business sites in the three major markets in the United States. Although the corporate market is 50 percent of these sites, the consumer and commercial markets will account for an estimated revenue in excess of $131 billion."

Vera Allen-Smith, *director of electronic publishing market analysis for Dataquest Inc., a San Jose-based market research company, commenting on the size of the major markets for electronic publishing.*

CORRECTEXT NOT INTELLIGENT

Dear Editor:

Seeing your recent piece on Houghton-Mifflin's CorrecText spelling and grammar correction systems (LT#7, p.8), I felt I should clarify their nature and origins.

The H-M English spelling corrector was the first linguistically based corrector, and is now available under several value-added retail names. It was funded by Houghton-Mifflin and developed by David Durand, Jacqueline Russom, and myself for Language Systems, Inc., a research and development firm based in Rhode Island. LSI is led by Henry Kucera, the Seed professor of Cognitive and Linguistic Sciences at Brown University, whose best known work is the Brown Corpus, a database of English prose widely used in computational linguistics, psychology, and related fields. The front end and data compression were handled by an excellent Canadian consulting firm.

The current CorrectText system for grammar is, unlike previous grammar products, based on linguistic analysis rather than statistical or rote methods. It is only a part of what we developed. The system was developed mainly by James Coombs, Andrew Mackie, David Nebiker, W. Richard Ristow, and myself. Dr. Coombs and I designed the linguistic analysis language. The particular grammar which the system uses was derived by Andrew Mackie and several consultants from the Brown University Department of English. The marketed version also includes certain changes by H-M. Other products, such as multilingual spelling checkers and readability evaluators, were also developed by LSI and its consultants.

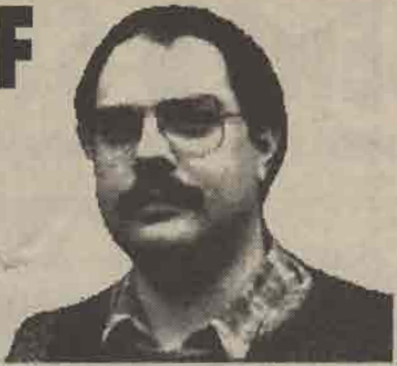
I must disagree with the extravagant claim: "This is software that embodies human intelligence." We built a great deal of linguistic knowledge into the system and used some artificial intelligence techniques, but I doubt any of the authors would attribute "intelligence," particularly of the human sort, to our code. In any case, the effectiveness of a system need not be measured by such intangibles. Rather, one hopes that a system will meet users' needs quietly and efficiently. If our system does that, we can consider our efforts worthwhile.

Steven J. DeRose
Dallas, Texas

WHOOPS!

A correction. The sidebar on page 24 of LT#5 erroneously states that Philips' Rosetta researcher S.P.J. Landsbergen "designed a Question and Answer system." Landsbergen contributed to the system, together with five colleagues. The same sidebar credits Landsbergen with the idea for the Q&A system Spicos, but the Spicos project was an initiative of IPO, Philips Forschungslabor Hamburg, and Siemens. Landsbergen wasn't involved in it.

A UNIVERSE OF WINDOWS



BY CHARLES HUGO

I picked up a copy of the "The Viewport Technician" by Michael Bentley recently. This book covers writing programs which are reasonably portable among the four main graphical user interfaces (or WIMPs) for microcomputers: the Macintosh, Microsoft Windows aka Presentation Manager, the Amiga and GEM for the PC and Atari ST.

I was struck by the basic similarity of the services provided by these systems. Of course, they differ greatly both in details and architectural concepts, but I think that their overall similarity stems from the fact that they all deal with the same things – input from keyboard and mouse, a bit-mapped screen, multiple windows for displaying information, and services for drawing graphics and displaying various styles of text. They are also, incidentally, all roughly based on pioneering work done at Xerox's PARC research facility in the '70s.

Unfortunately, the systems are different enough to make it extremely difficult to take a program from one environment and get it running in another. Even Microsoft Windows for DOS and OS/2 Presentation Manager do not present an identical set of services for the programmer. It also occurred to me that these differences are completely unnecessary and are a serious obstacle to the universal acceptance of the graphical user interface.

This is not the case in the UNIX world, where X Windows has been established as the standard graphical interface. X Windows is a server – it is, in effect, a software black box or virtual machine. An application program tells the X Windows server to create a window and what to display in it. There is a standard protocol for communication between the server and applications which allows programs to be written which will run unmodified on UNIX machines ranging from a 386 PC to a Cray. AT&T has also announced a set of guidelines and tools for the actual details of the user interface called Open Look – programs following these guidelines will have a common "look and feel."

What we need is a similar standard for personal computers: a universal basic toolkit for writing programs which use the graphical interface – in much the same way as all C compilers offer a standard library for handling files. Applications would not necessarily need to look identical on every machine, but should have similar features and work identically (so Apple and Microsoft could each put their own stamp on their respective systems). That this is possible is shown by programs such as PageMaker which run on both the Macintosh and under Windows. If such a standard was designed carefully, it could even be implemented as a module running on top of the current systems, this would allow upward compatibility of existing software.

No doubt, to get the maximum possible performance, some machine-specific features would have to be used, but these could be isolated to small, easily changeable areas. In any case, the programmer's job would be considerably lightened and more time could be spent on the interesting creative bits – the bits that the end user buys the program for in the first place.

It would be an even better world if this graphical user interface metaphor could be extended to communication with online services, mainframes and minis. The current communication standards were designed for dumb terminals – microcomputers are intelligent. I don't know why Compuserve, BIX, etc. users have to type in cryptic commands (unless it's a way of keeping users online longer). The host could just as easily tell your PC what menus to generate, what font to display text in, and so on. What is more, previously used screens could be saved for re-display if needed – thus avoiding the tedious retransmission of the same menu again and again. You want the main menu? Just pull down the "Goto" menu and click on "Main Menu" – no more searching in quick reference cards.

KEEP IT ONLINE

Are you getting tired of reading that Microsoft Bookshelf is the ultimate writer's tool? You don't have a thousand dollars lying around for a CD-ROM drive? Well, you can get a lot of similar functionality from relatively cheap packages. Sorry, no, you can't get the full text of the American Heritage dictionary onto a 20Mb hard disk. If having that online is part of your own personal eldorado then you'll just have to fork up. For the rest of us, there are some neat little TSRs (terminate and stay resident, or RAM resident programs, for DOS) and DAs (desk accessories, for Macs) around.

If you're a programmer and need access to DOS and OS/2 reference manuals, try Peter Norton's "Norton Guides" (what else could he call them?). There are several ready-to-use guides available, but you can also compile your own guides from standard text files. You can then access them at any time with the Guides TSR, which requires around 70K of RAM.

If you need to update information while using another program, Reference File by Reference Software is what you need. This is basically a free-format database which you can call up at any time. You can define a default entry format and search for indexed key fields for handling more structured information such as addresses, bills, etc. But the real beauty is being able to just type in information as if it was a mini word processor. Although it is somewhat quirky in places, and the review version locked up the computer several times, it's a unique and extremely useful program. The ability to type in information whenever you want makes it far more useful, in some cases, than read-only type programs.

If you need dictionaries, Proximity has a very abbreviated Merriam Webster's dictionary, Marctech (Switzerland) packages the Collin's bilingual dictionaries with a special version of Linguatech's Termex/Mercury online glossary program, and INK International produces the TermTracer bilingual glossary manager together with various technical dictionaries (reviewed elsewhere in this issue). Incidentally, the latter two also allow online updating.

On the Mac, Hypercard can be used to design your own information system, and a desk accessory called "HyperDA" from Symmetry allows you to view them while using other programs. Deneba Software makes "Spelling Coach Professional," which includes the Proximity Merriam Webster dictionary. I don't know of any bilingual dictionary programs for the Mac. Please drop me a line if you do.

ENHANCED KEYBOARDS

When the IBM 101 key or enhanced keyboard was introduced, I decided right there and then that I didn't like it.

I still have misgivings about the layout even though I use one daily now. They should never have put the function keys at the top of the keyboard, no matter how wide it would have been if they hadn't. The dual Ctrl and Alt keys are a godsend with some programs, and I like the Caps Lock, but I still haven't really got used to using the new cursor keys.

Still, I suppose the main thing is that it's now a standard – and not only on IBM compatible machines, because (while carefully avoiding any reference to IBM) Apple's Mac II extended keyboard is just an enhanced keyboard with a few minor key label changes. The Acorn Archimedes also has the IBM enhanced keyboard layout. I hope that this is the trend for new computers, and that the agony of adjusting to new keyboards will soon be something we had to do "in the bad old days."

PLEASE WRITE

Please write me any comments, questions or HBIs (half-baked ideas) you may have about (or not about) this column. The address is: Charles Hugo, Roemer Visscherstraat 43-45, 1054 EW Amsterdam, The Netherlands.

NOTABENE'S STEVE SIEBERT

PONDERS WHETHER BUSINESS ETHICS ISN'T A CONTRADICTION IN TERMS

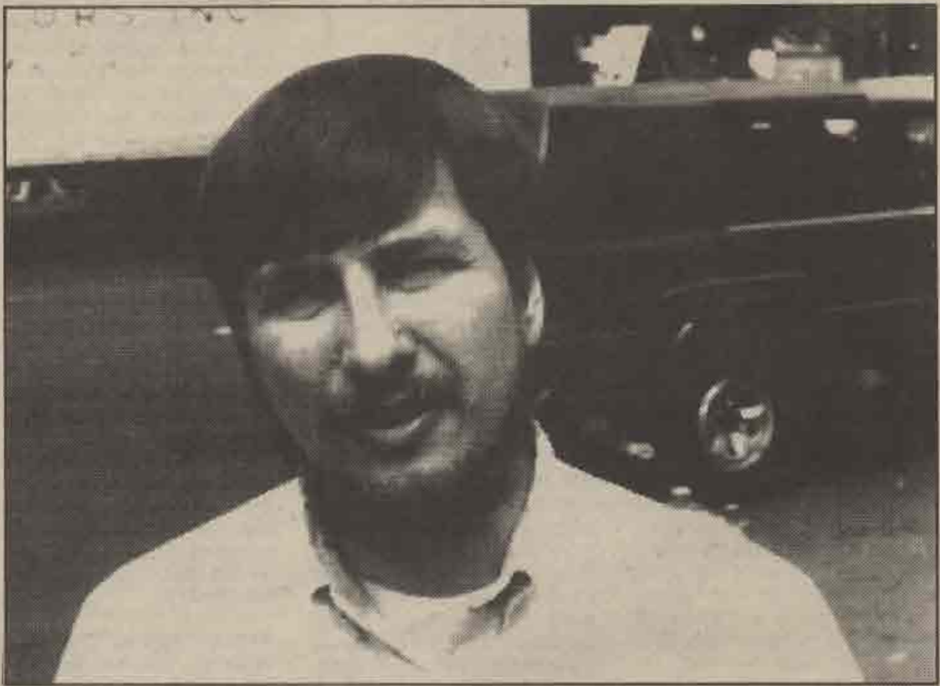


PHOTO BY PETER RUTTEN

Dragonfly's NotaBene is the doyenne of word and information processing for academics. The program is based on the wordprocessor XyWrite 3.1 and freeform text retrieval system FYI 3000 Plus. NotaBene is thus both a multilingual information processing system with numerous academic writing features *and* a text retrieval system that lets the user retrieve notes from within the wordprocessor.

The manual is thicker than the New York Yellow Pages, the reviews adulatory, and the price reasonable. Yet, Dragonfly founders Steve Siebert (36) and his wife Deborah Neumann (37) have so far sold fewer than 10,000 copies of NotaBene, and pessimists have expressed doubts about the company's future in a world of giant software companies.

Steve Siebert told his story to LT associate editor Peter Rutten.

"I was born in Japan, where my parents were Mennonite missionaries. They were sort of withdrawn from the world and tried to bare witness to what they believed to be the truth. I lived in Japan for 16 years and was very much shaped by it.

"I met Deborah working in a shelter for the homeless in Brooklyn, where she was coordinator. Getting into computers is something very different for someone with my background. I'm a closet Luddite in some ways. I feel that machines can't do very much, at least not the things that matter in the world.

"Yet here I am, having spent the past seven years of my life working with computers. I sometimes feel torn by this. Why am I doing this, producing sophisticated wordprocessing software? Am I providing what people really need, or am I providing some new tool to the people who are more privileged and who have all the chances anyway? That's a part of my personality that inevitably shapes the company.

"On the other hand I've always been very interested in new technologies. When I was a graduate student at Yale and we took our qualifying exams, we were told that you could either write them out by hand or spend the same amount of time typing on a typewriter. There were three people in my class of 30 who had a typewriter. And I had the fanciest one, an IBM Selectric.

"So while we pounded away for six hours, I remember thinking that even though the professors had said that nobody would get extra credit because they typed their exam, I couldn't understand how they thought it wouldn't influence their reading of the text. Nobody writing by hand for six hours could write nearly as much, and their handwriting would eventually be illegible."

DON'T GET A COMPUTER

"Right after I began my dissertation – it's about the 'hermeneutics of suspicion,' and I still haven't finished it – the IBM PC was introduced in the U.S. I'd been thinking a lot about getting a computer, looking around, reading computer magazines. I went to the computer lab at Yale and asked about buying one. They put me off, because it'd take to much time to learn. They said: 'Finish your dissertation instead.'"

"I borrowed $4,500 from my parents and got an IBM PC. This was early November 1981. I had one of the first PCs in New York, never having even touched a computer before in my life. I got the IBM PC because it had a detachable keyboard. I felt that if I read a book, I could put my feet up on the desk while I typed my reactions or quotes and so forth.

"I didn't get the printer IBM supplied, because it only had 10 pitch and I'm a wordy fellow. I decided I needed 12 pitch in order to write my dissertation. I bought a Sitoh 8510 Proprinter by mail order.

"This was in the days of EasyWriter. You couldn't even get an IBM printer to do things like underline properly. So here I had this printer that didn't work with EasyWriter. There weren't but half a dozen people in the city with an IBM PC, and I had to try to get it to work.

"It took me a week to go through the Sitoh printer manual. But eventually I was able to figure out how to get that printer to work on my own. I thought: 'Hey, this stuff isn't hard.' So I continued working on my dissertation and at the same time started consulting academics on computers.

NOT THE RIGHT TOOL

"I soon reached the point where I realized that neither EasyWriter nor any other program was the kind of tool I needed for the dissertation. They wouldn't footnote or do a table of contents properly. And most importantly, there wasn't a program that had full freeform text retrieval capabilities.

"My idea of a powerful tool for academic life would be a program that'd let you type in notes, and then while you're writing, retrieve every reference to, say, Marx and Hegel, but not Freud. I really wanted to be able to do that.

"I looked around and was tempted by a program called XyWrite from XyQuest in Massachusetts. Then I found a company that was working on a text retrieval system called FYI – Oikos in Texas. I talked to them both before their products came out and told them what I was interested in. Finally, they granted me a license to merge the two programs.

"I thought I was going to spend about three weeks getting these two packages, writing a few quick macros and a thirty page manual that describes how the programs worked together. What actually happened during the next year or two was that I came up with longer and longer lists of things the combined program should do, based on the requirements of academic discourse. I'd be telling them things like: 'We need three levels of footnotes, indexing that lets you have more than one index, etc..' And Dave Erickson of XyQuest, kept changing the program so that it would do all these things.

"Finally, I sort of patched together early versions of the two programs with macros, and showed the result at the Electronic Workshop of the Modern Language Association Convention. The program was a rather crude integration of the two, but I could actually dump text directly from my notes into the wordprocessor.

PEOPLE CROWDED AROUND MY STATION

"One of the organizers of the convention noticed that people just crowded around my station, and they decided they'd follow the program's development 'with interest.'

"Deborah, my brother Lawrence, and I started putting together a real program, without any outside funding and no resources except our skills. When version 1.0 of NotaBene was ready, we called the Association, and they said they'd like to sell it to their members – professors in German, English, Spanish, French, Russian, what have you. We were in business.

"We went to a lot of academic conventions to sell the program. There was a lot of interest, yet I also noticed that there are still a lot of people in academe who didn't want to take the plunge.

"The reason was that the first people who knew about computers were – justifiably – excited about their potential. But then they started talking about AI and cognitive capabilities on the part of computers, the possibilities of paperless classrooms and offices, and bookless societies. That frightened off a lot of academics.

"When academics did get a computer, they used it simply as a typewriter, without tapping more of its capabilities. They were afraid the device would overwhelm them, steal their lives away.

"This is one of our difficulties in going against programs like WordPerfect and Microsoft Word. Academics will still largely say: 'These programs do what I want them to do. They're really good typewriters.' We now need to show people that computers can do more for you without rendering you superfluous . . . though they'll never do enough to make the earlier claims true."

FOUR YEARS OF OBSCURITY

"We're a case of a company that in four years of obscurity developed a program that's been received very generously by critics, but without having any start-up money. We started with a few family loans of at most $50,000. And we have a few other business loans out – very small ones. The program has been developed through sweat and blood, fifteen hours a day, seven days a week, for the past five years.

"We do very little advertising. You don't see us in PC Magazine. We thought we'd have a vertical market program. What we would do is produce the best program we possibly could, everybody would see its advantages. And the academics particularly. So we wouldn't have to market ourselves.

"We've always preferred to put money into development. One page in PC Magazine for one year costs more than a year of development of Japanese for the program. However, it has turned out that we really do need to market. We're now bringing in more people in marketing -- Peter Wheeler, one of the founders of Logos, for instance.

"I'm convinced that we can be profitable on our own in the future, without becoming a company like WordPerfect or Microsoft. I'd dispute the notion that you can't do interesting things unless you're a certain size. We're small. We have about twenty people working for us, which is one hundredth of their size, but we've learned to survive."

NOT LIKE WORDPERFECT

"I have very personal reasons for not wanting to become like WordPerfect. I wouldn't know what to do if I made a lot of money, for one. I think it should go to shelters for the homeless. In New York alone, there are between 20 and 50,000 homeless people. It's easy to say 'that's just a radical's perspective on social problems, just go about your business and you'll be a good business person.'

"Another problem is who you want to supply the program to. If a certain critical figure in the US, whom I'm not very fond of, retired and were to call us up because he wanted to get NotaBene to write his memoirs, I wouldn't be inclined to sell it to him. And what if someone from the South African government wanted NotaBene, or Pinochet?

"These people might ask: 'Why do you feel that way? Don't you really think that full dissemination of information is the best way to more understanding and peace?' It's like Plato's argument that closest to knowledge is virtue. I don't think that's true, but all this shows how much these ethical questions plague us. So far we've been able to evade them because we've had to work so hard. But they're alive."

PROSPECTS

"There's one thing certain members of the press are wrong about – that we won't be around tomorrow. We've been around for five years, at times when other people would have given up. We never wanted venture capital, because it wouldn't have enabled us to do the interesting things we wanted to. Like I said, we've learned to survive, though at times it's been hell.

"We now have prospects in Germany. We have a distributor for all Scandinavia. We have things going on in France and the Soviet Union. And thanks to the Hebrew script, we're already the major wordprocessor in Israel. We have too many things happening for us now, after five years of nickling and diming, to give up.

"In April, we decided to grow and move out into the general market. Since then, we've been restructuring the company, and we've started advertising. Sales aren't very good yet. So far we've sold under 10,000 copies. But then we've only done the vertical market. We'll grow, but we'll still be small. By being small and lean – and maybe mean – we can do things without looking at the market all the time – unlike WordPerfect.

"I guess what matters most to us, in the end, is the program – not becoming rich on it. Working on NotaBene is like publishing a book that says something, but it doesn't say everything you know. You know it could be improved on many points. People are saying: 'Give it to me now, because it does more for me than any other option.' But then we say: 'Well, when you're switching between Hebrew and English, the cursor movement could be more convenient' . . . I guess we're just too concerned."

PHILIPPE AMIEL

ENGINEERING OUT ON THE LANGUAGE VECTOR

In a modest 11th arrondissement apartment block, far from the centers of Parisian high-tech or brash new information brokering outfits, a fugitive from the cloistered traditions of French paper publishing has set up shop under the snappy portemanteau of *Intellexis*. Philippe Amiel *à votre service* – lexicographer and communications counsellor.

TIRED OLD PUBLISHERS

In fact, the gentleman with the quick smile and rapidfire voice is a self-styled linguistic engineer – a Mr FixIt of the language industries, always ready with a toolkit and an array of bright ideas to help out wherever language is a problem in communications or information systems.

"After eleven years working on dictionaries with Hachette, either editing or authoring various types of reference book," explains Amiel, "I realized there were huge technical possibilities out there just crying out for lexicographical applications. I set up Intellexis in 1983 to handle the technical side of *Eurolexic*, an ambitious European multilingual lexical database project, now defunct. And for four years, we developed computerized tools to help the process of dictionary-writing."

Eurolexic folded at the end of last year, mainly because none of the big participating publishers, including Hachette, wanted to be the first to stick their hands in their pockets and finance more work. What really amazed Amiel was their "truly horrifying ignorance of the possibilities of dataprocessing."

"These people had a profound lack of technological culture. Every time a choice had to be made, they systematically made the wrong one."

Experience has taught Amiel that traditional paper-dictionary publishers are not, as one might expect, manufacturers of information, but just people who sell paper with print on it for a profit. For instance, Amiel doesn't believe that Hachette's recent purchase of US electronic encyclopedia publisher Grolier implies any change of heart towards new information technology.

"Diversification for a publisher simply means using its current outlets to push more stuff, not develop new ideas. Hachette's abandoning its lexicographical projects and then buying up Grolier is not a paradox. Hachette simply wanted a foot in the American door, and Grolier provided it."

Amiel put a lot of work into Eurolexic, but claims he's not bitter about the comedown. "I learned a lot, and managed to develop a functioning metamodel of what a computerized lexical entry should be." The idea was to offer a sort of database standard, designed to stimulate the other Euro-publishers concerned to build up a network of lexical databases that could then allow various multilingual dictionaries to be generated.

When the end came, Amiel had to lay off half his 20-strong staff and rethink Intellexis' commercial strategy. Depending on one client, especially a traditional publisher of printed paper, spells suicide in the language industries.

VIDEOTEX

Re-enter the language engineer, running a honed-down group of dedicated wordheads. "Our approach now is to generate methods and concepts which are, as it were, a technological extension of the sciences of language." He sees university-style linguistics as being essentially designed to . . . well, teach linguistics.

Real technological limitations in natural language communication, such as memory size and screen ergonomics, have never entered the theoretician's world of research as genuine constraints

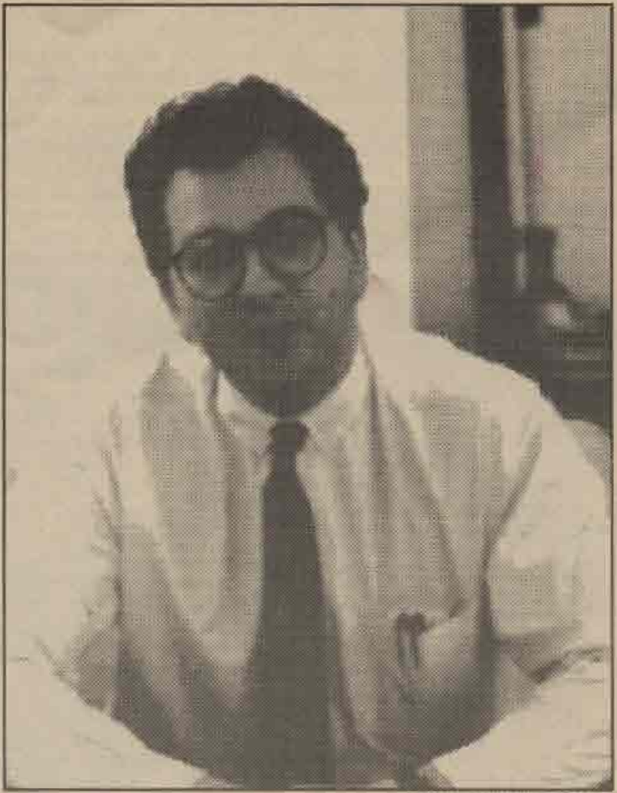


PHOTO BY ANDREW JOSCELYNE

Philippe Amiel: "Our idea is to give birth to a disjunctive vision of lexicography. Today's paper medium dictionaries make no distinction between the work of communicating and the work of constituting lexicographical information. I believe that the two processes, even if carried out by the same person, are operationally and above all epistemologically distinct."

"Sticking a language program on a computer usually tells you more about how the computer works than how language works. We're interested in how language functions in the real world of digital communication channels."

As a concrete application of these methods, Intellexis designs and creates natural language interfaces for the minitel (videotex) market. Amiel sees videotex communication as a special sort of conversation. "Service producers are coming to realize that a minitel screen is full of words and that language is the vector for all user-system interactions. The big challenge of minitel is that users can press the OFF switch whenever they like. And the sooner the better for them, since it'll cost less."

So Intellexis is thinking up ingenious ways of exploring how interest, intelligibility and attractiveness are conveyed by language and can be enhanced by value-added linguistic techniques. "Everyone agrees that there are plenty of interesting products around, but no one has done any useful work on how videotex communication can be improved as language."

A current project involves the French Ministry of Equipment. Intellexis is creating a videotex service for them, likely to tot up some 600,000 hours of consultation per year. Covering various subjects of land use, the service will be accessed via a "notions" menu, which will gradually lead the user through a maze of esoteric technical terms. "One thing we've realized is that a sophisticated knowledge base available to the general public will have to have a glossary back of it", says Amiel, but he isn't giving away the secrets of his accessing strategies.

A NEW LEXICOGRAPHY

Lexicographical work proper for CD-ROM technology is also going on for unspecified clients, and Amiel remains unimpressed by the recent Link Resources prediction that only some 300,000 of a predicted European pool of 30 million PCs will have a CD-ROM drive by 1990. "Everyone has made mistakes about the CD-ROM market. In reality, CD-ROM producers are waiting for more drives, and users are waiting for more products before buying a drive . . . Market logic is never what researchers think."

What interests Amiel particularly is generating a new lexicography, sensitive to various different user needs and liberated from the tenacious grip of those old fogey dictionary publishers. "Our idea is to give birth to a disjunctive vision of lexicography. Today's paper medium dictionaries make no distinction between the work of communicating and the work of constituting lexicographical information. I believe the two processes, even if carried out by the same person, are operationally and above all epistemologically distinct."

He points out that the recent industrialization of WP software packs with built-in dictionaries and spellcheckers has shown that there is a market out there. "Using relational database technology, you can string up links between entries in ways that paper dictionaries obviously can't do."

In the wake of such interests, Amiel has been asked by the French Ministry of Research to examine ways of capitalizing on specifically lexicographical data for non-publishing uses. "Apart from human users, truly electronic dictionaries can also be read by machines, so we're looking into how the traditional material can, if at all, be used in high-level spellcheckers, large-scale lexical lookup systems and machine translation programs."

In addition to the man-machine interface, Amiel is also interested in how humans double-talk their way to confusion. His outfit offers companies help in mastering what he dubs the language vector in their internal and external communications.

"Exponential growth in business communications, from understanding markets, through handling new designations inside company hierarchies, to investigating the psychological reactions to language in meetings, has meant that putting things into words has now become an engineering problem. We can offer a variety of methods and techniques to help company personnel speak to each other."

Sounds as if listening to those major Euro-publishers mincing their words – Euro-dyslexic as one cruel commentator had it – has given engineer Amiel a new lease of business life after all.

— Andrew Joscelyne

TRUE, FALSE, MAYBE, NONE OF THE ABOVE, NOT YET, AND IN ANOTHER PART OF THE FOREST.

CONTROLLED ENGLISH & POETIC COMMON SENSE

Controlled English is hailed by some as a boon to technical writing. Vicky Hearne disagrees. She accuses its "pseudo-literate" proponents of advocating an unnecessarily debased form of human language. And "fulminates" that it shores up rather eliminates lazy thinking.

by Vicky Hearne/Photos by Hans Hendriks

In the March-April issue of *Language Technology*, there's an article by Geoff Pogson about something called Controlled English. Pogson notes that Controlled English is a topic that causes many people to fulminate, and that's how you find me now, fulminating, with warmth but also with some apologies, because it isn't clear to me that it's any of my business. What worries, harasses, bedevils, bullyrags and provokes me when I'm not practicing Zen is the widespread phenomenon of pseudo-literacy, and I darkly suspect that Controlled English is a cover for pseudo-literacy.

This is not the same at all as, say, illiteracy in an oral culture. The latter simply means that the traditions and disciplines of the tribe in question entail a sophisticated mastery of an *oral* tradition of narrative and argument rather than a written one. Quite often, an "illiterate" will put the pseudo-literates of our culture to shame, especially in a discipline such as sheepdog training, of which you can't be a master without also being a master of language.

Pseudo-literacy is not an incomplete form of fully human language the way, say, what a three-year-old child or a signing chimp does is. It's an active principle, hostile to thought and clarity, that *replaces* language the way some poisons replace the nutrients the body needs. And the mind, like the body, does better with complex and hard-to-analyze natural foods than with vitamin pills. Pogson's article on Controlled English seems to be about a form of pseudo-literacy presented by pseudo-literates. I know that sounds harsh. I don't think of pseudo-literacy as a moral failing, but as a virus picked up in schools and from newspapers the way a belief in witches used to be.

Here are the first two rules for a form of Controlled English called Ericsson English Level 1:

1. *Each word conveys one meaning only.* "Connection" is a noun meaning "an electronically conductive joint, a link." It may not be used to mean "The activity of making electrically conductive joints" – "Connection" expresses this meaning.

2. *Only one word conveys each meaning.* "Start" is not interchangeable with "Begin", "Commence," "Initiate" or "Launch."

Consider the words "electronically" and "electrically" in the explanation of the first rule, and the flawless way they violate the second one. Also consider the phrase "is a noun meaning," where just writing "means" would not only do as well, but better, since the information that both "connecting" and "connection" are nouns, not only in Ericsson English Level 1 but also in English, is just a bit of typographical noise.

> **When a child calls a horse a dog, we tend to call it a "mistake," but using a word that way to cross back and forth over the boundaries of a concept is exactly the way people learn the boundaries of a concept and the territory on all sides of it.**
>
> **Pseudo-literacy is an active principle, hostile to thought and clarity, that *replaces* language the way some poisons replace the nutrients the body needs.**

IN ANOTHER PART OF THE FOREST

Typographical noise of this sort is typical of the phenomenon I've called pseudo-literacy," and it clogs thought. Great editors such as Harold Ross, who founded *The New Yorker*, have always battled it valiantly, as do writing teachers who don't themselves happen to be afflicted. It can happen to anyone – like AIDS – but it wasn't until recently that the superstition of mechanomorphism, the belief that attributing the traits of machines to creatures increases the scientific holiness of a theory, expanded to the point where companies will actually pay money for pseudo-literacy, when what they need are employees (and bosses) who can read and write. What is especially distressing is that the phenomenon of people selling lessons in Controlled English can't even be called a scam. Like evangelists, its promoters appear to believe in their own PR.

A philosophical point that emerges from the rules given above for Ericsson English Level 1 is that they are rules my old Macintosh 128 had no trouble with. They are also rules that no human being and no dog can obey, not because human beings and dogs think imprecisely, but because their precisions, unlike a computer's, are not founded on combinations of two fundamental impulses, + and –, or the numbers 1 and 0, but rather on a vast number of them including True, False, Maybe, None of the Above, Not Yet, and In Another Part of The Forest.

For a tracking dog or a tracking human, a poet, a philosopher, or a technical writer nosing around for the syntax that will get the job done, the last item (In Another Part Of the Forest) is irreducible, just like + and –. If, for example, your police-dog tracker says (displays) "In Another Part Of The Forest," and you try for a breakdown of that, an explanation, the whole project will fall apart, because In Another Part Of The Forest in that context cannot be analyzed.

The same thing happens when a philosopher is in full tracking mode, which is why Wittgenstein wisely ignored everything his teachers had taught him about expository prose connections between one conceptual position and another, and just went off to another part of the forest. Some people who do that don't come back alive, of course, but Wittgenstein, who was a brilliant engineer, incredibly good at thinking through technical matters, did, and he reports that there is no such thing as the meaning of a word.

For human beings, even simple concepts such as "kitty" are learned as matrices of thought. A child mastering "kitty" masters "new kitty," "big kitty," the proper name "Kitty," and "not like Kitty (because unfriendly)," as well as "good kitty," "bad kitty," and "hungry kitty." To master "kitty" is also to know how to trope, or use words figuratively. There is, for example, "Kitty's in bed!" with a squeal of delight when the cat jumps into the drawer full of silk lingerie. And the literal is neither logically nor historically prior. Calling a horse a "saddle dog" occurs as part of and not after the mastery of the concept "dog."

THE TYRANNY OF TESTING

When a child calls a horse a dog, we tend to call it a "mistake," but using a word that way to cross back and forth over the boundaries of a concept is exactly the way people learn the boundaries of a concept and the territory on all sides of it. That is why an I.Q. test might give the following sequence, expecting a child to find the odd man out:

1. Bird
2. Horse
3. Table
4. Dog

The "correct" answer could be either "Table" or "Bird," depending on whether the list is organized as containing three animals and one piece of furniture, or three things with four legs and one with two legs. (The legs of a table are there, of course, by grace of trope, the trope called "dead metaphor.") In *The Tyranny of Testing*, Jacques Barzun criticized standardized tests of achievement and intelligence, in part because of the frequency with which it turns out that there are two or more answers, and that the best answers are often unnoticed by or deliberately ignored by the testing agencies.

If you give a machine a list of the objects that count as "kitty" and forbid it to add pumas, furpieces and Aunt Kathleen, it will have no trouble with that. For people, however, knowing the literal meaning of a term is not a matter of knowing a list or a definition. Consider this list:

feed the kitty
feed the lion
feed the horse
feed the snake
feed the baby
feed the goldfish

The physical movements these expressions describe have little or nothing to do with each other. Holding an infant to one's breast is not like tossing a flake of hay over a fence, or shoving a Christian into a cage, or sprinkling bits of fish food over a bowl of water, but an ordinary speaker of English has no trouble understanding that, in each case, the verb "has the same meaning," and further that it's a literal meaning. A native speaker learns literal meanings *by projecting terms into new contexts,* that is by making conceptual leaps on the backs of words, from feeding fish to feeding horses.

Sometimes we feel the leap as a metaphor, as when we say "feed the meter" or "feed my ego," but it's hard to say what it is about those leaps that are metaphorical rather than literal, especially when you consider "feed the fire" or "feed the rosebush." We do say that fire "eats" and "devours the countryside," but we don't usually say that rosebushes eat, even though Blake noted that the rose had teeth in the mouth of a beast. And we feel that "feed the rosebush" is closer to "having the same literal meaning" that "feed the lion" does than "feed the fire" is.

With Ericsson English Level 1, a scientist writing instructions for a lab assistant would be forbidden to write a note saying "Feed Bacteria X23Z to petrie dishes 5-12." The impulse to give the instruction using the metaphor on "feed" rather than a longer literal construction is simply poetic common sense. That such a move is forbidden in Controlled English is not a trivial matter.

DOGS HAVE INSIGHT

Dogs, like humans, learn terms in three and four dimensions rather than on a linear model. A dog in formal training has to learn that "Joe, Sit!" means this:

Illustration: Max Kisman

Learning this takes a while, not because dogs are dumber than people, but because the dog, like the human being, learns by means of the activity of projecting the term into new contexts. Say the dog is a kennel dog named Ashley. It used to be, before we had worked so much on "Sit," that she greeted me by jumping against the gate, warbling, and picking up her food dish and tossing it about. Suddenly one morning, she greets me by sitting, very formal and square, and lifting her muzzle up into the posture that makes it easy for me to put her collar on.

If I accept this greeting in any way at all – by, say, crinkling my eyes pleasurably – "Sit" will now mean "I'm glad to see you and ready to work." (And by the inscription "Sit" here, I do not, of course, mean *my* utterance, but the posture, gesture, the *dog* has made.) I have not asked the dog to mean "I'm ready for work," but the dog has projected the "term" so that it now does.

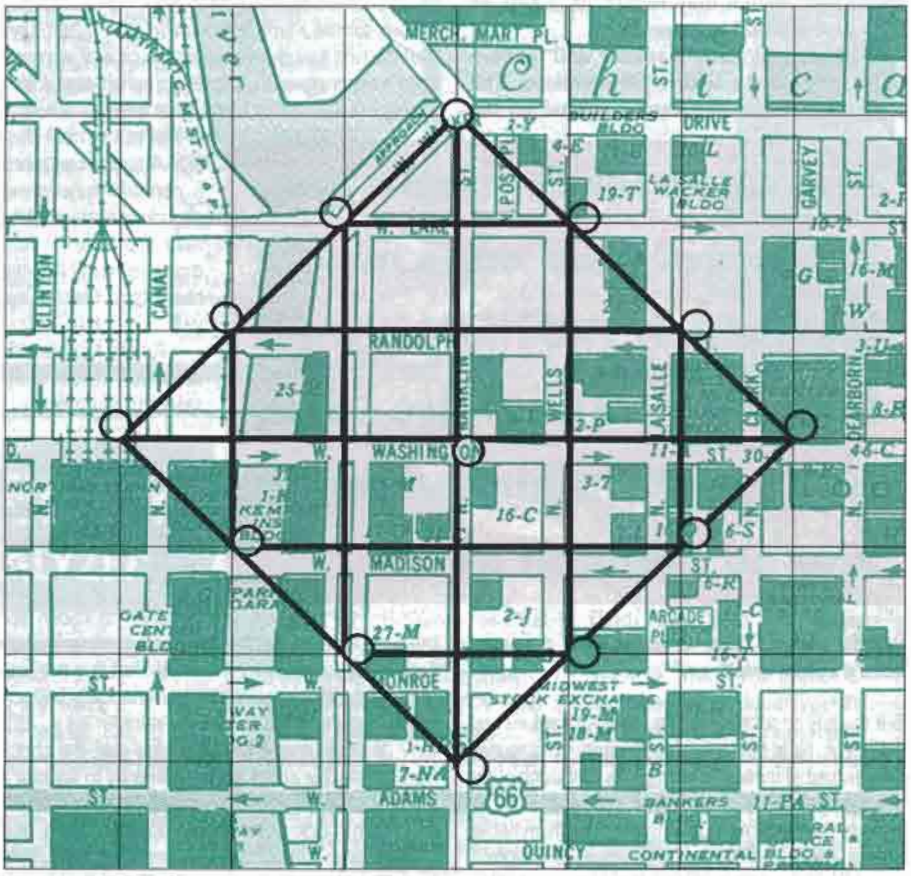
That capacity on the dog's part to project terms through complex parabolas of trope is how it comes about that for an obedience-trained dog, the formal posture of sitting at your side, prepared for the next command, comes to mean "I'm ready to go," or "I don't know what that noise is, boss, but I don't think it's gunfire," or "That man isn't drunk, he's dead," and because language is at least four-dimensional and of the essence of connectedness, the posture in formal work may also come to have the not-entirely-honest meaning, "*I* don't know how that garbage came to be in the hallway!"

Formal training is, of course, in part a matter of keeping those hovering meanings under control. In an obedience trial, you don't want your dog to wool-gather, experimenting with new meanings of "Sit." It may seem that, say, mathematics is different from this, that in mathematics, definitions and meanings hold still better than they do with dogs and children.

It is dangerous and productive of unhappiness to use a set of half-assed "rules" about writing instead of genuine thought to miss an accurate account of the collars by so much as a comma.

MEANING IS USE

But consider the following *bête noir* for philosophers of mathematics. A circle consists of "all the points equidistant from a given point." Yet that definition can be used to make a square in Taxicab Geometry. In a city laid out in squares rather than rectangles, a cab driver who took passengers to all the intersections exactly three blocks from, say, the corner of East Third Street and Jefferson Avenue, would describe a figure, that is, by the definition given above, a circle:



When a conceptual disturbance like this shows up, one's first impulse is to say "But that isn't what we *mean* by "circle," which means something like "That's not how I'd use the word 'circle!'" That is why Wittgenstein said that meaning is use, thus pointing to the idea that the life of a concept is not to be discovered in a definition or a logical or grammatical rule, but rather in the interlocking precisions between the Word and the world.

A mathematical *subject*, as opposed to a definition, can of course pretty well exclude this irritating "square circle," because within the subject there will be theorems to the effect that a circle rotated to any degree is equivalent to itself, and so on. My point is that the way you limit, delineate, and define a term is not through a rule of the sort that has "may" and "may not" in it, but through a matrix of thought. And, as Jacques Derrida, Wittgenstein, and others have shown, the nature of language is such that even in mathematics and the sternest philosophy, scientific discourse, or poetry, there will be a fissure in the allegory, an incompleteness of control, and square circles will come tumbling in.

This is what makes writing hard, but it is also what makes it fecund, not only of theory but of practical knowledge. William Steinkraus, for example, is an amazingly clear writer and also a great horse-trainer. About horses, he notes at one point that a refusal to halt is a form of refusal to go forward.

The remark not only reinforces the importance of teaching jumpers to halt, but also makes the technical term "forward motion" more precise and points to the fact that, in horsemanship, it doesn't mean what "going forward" might mean in a police traffic report. Rather, it refers to a lively impulse of cooperation and responsiveness between horse and rider, and indicates that a bolting horse is not responding to the rider and thus not doing what a dressage judge looks for in a test in which forward motion is required.

"PRIMEVAL BARDS?" NO SUCH ANIMAL

The need to range among definitions, and even the acceptance of paradox, is the mind's need to think, a need prompted by the inevitability of the world being beyond the most subtle understanding of a given human or the most precise calculations. That includes the need to use words in the absence of satisfactory definitions, just as a child learning to use the term "kitty" must. If you are forced to use a "language" that does not allow for the unforeseen and the impartially understood, you are forced to walk blindfold through a mine field. I must return to my fulmination. Pogson says this about Controlled English:

"Those who hate it, point to its sometimes apparent pedantry and arbitrariness, and are piqued at its "unnecessary" constraints on individuality, which they regard as a slur on their professional independence.

"Of course, many a reader will instinctively sympathize with such emotions. The mere suggestion of external control on the words writers use arouses the primeval bard's sullen wrath . . ."

The rules for Ericsson English Level 1 are ones my old Macintosh 128 had no trouble with. They are also rules that no human being and no dog can obey.

But there is no such thing as a primeval bard, wrathful or not. Real poets, with a mastery of language undreamed of in most philosophies (although not in Wittgenstein's), are the most submissive of all writers to "external" constraints. Each syllable, stress, pause, consonant, and vowel is weighed, counted, and measured, and the domain of reference is controlled with exquisite care. This is why students who are first having, say, Shakespeare's or Frost's or Goethe's enormous control pointed out to them think it looks like magic, or terrifyingly beyond them at any rate, just as Olympic figure skating or gymnastics are beyond what I do when I fumble my way out of bed in the morning.

If you want to know what English is like when it is under control, study poetry with someone who knows what they're doing, and try your hand at producing as many as 20 syllables that are as well controlled as *Hamlet*. There is no more any such thing as "the primeval bard's sullen wrath" than the primeval mathematician's sullen wrath. Of course, both poets and mathematicians can get cross about the vulgar, fumbling things philosophers and other riffraff say about their disciplines.

They even get wrathful. I once heard the great applied mathematician Gian-Carlo Rota, for example, tell a conference of dignified and aggressive philosophers that their efforts to characterize mathematics caused them to look to a true mathematician like a child straining on the potty. And when I watch certain enthusiasts for Controlled English in action, it's like watching a child who can't even find the potty yet.

This matters enormously, because the pseudo-literacy and pseudo-thought that result from infantile notions of what language is and what it is to have control over it do not amount simply to an annoyance to the literati, but rather constitute active interference with genuinely controlled language "whose economy, clarity and unambiguity cannot but boost efficiency, happiness, and ultimately safety, at work" – which are among the Controlled English blisses promised in Pogson's article.

DANGER! CONTROLLED ENGLISH

Limiting a writer to Controlled English is like limiting an expert racing car driver to cars with only one gear, on the grounds that more than one gear causes confusion and unhappiness, which of course it does for the inept beginner-driver. Pogson says that the first two or three years are crucial in a company's experience of Controlled English, that if they don't stick with it that long, there is the danger that it will fall by the wayside. But you can teach a normally functioning pseudo-literate adult to read and write in less than two years! And the benefits of literacy are vast.

As are the hazards of pseudo-literacy. Consider this sentence:

"Safe electrical stimulation fools the dog as if something physical were happening."

I happen to know that the author of that sentence is a Controlled English enthusiast. I also happen to know that dog owners, reading it, do not notice the grammatically hallucinatory nature of the use of the phrase "as if," but they do come away with the idea that the shock from an electric collar appeals directly to the dog's mind, the way God does. So they set the collar for maximum shock, put it on an unprepared dog, and happily push the button. The dog goes nuts, gets burned, and sometimes hurts itself in its first frantic (and unmistakably physical) response.

Now as it happens, there are proper uses of electric collars. That's why I own one. And as it happens, it is difficult to come up with prose that describes the nature and function of the collar properly. It is also dangerous and productive of unhappiness to use a set of half-assed "rules" about writing instead of genuine thought to miss an accurate account of the collars by so much as a comma. It was similarly dangerous and productive of unhappiness as well as burnt brains and corpses when pseudo-science and pseudo-literacy were used to miss the description of electric shock therapy by rather more than a whisker on the chin of a comma.

Pogson reports that technical writers from the United Kingdom are especially prone to display the primeval bard's sullen wrath when presented with Controlled English, and says that this can be put down to the general "conservatism" of British business practice. A Limey can sometimes be an annoyingly hidebound person, unquestionably. You might call it a right, a stock-in-trade of a native of the nation that produced Shakespeare, Dickens, and Queen Victoria, and that has not professional societies but Royal ones. But the significant point here is that the British are much less afflicted and infected than the Americans are with pseudo-literacy and are therefore more likely to be sensitive to its expensive and dangerous obfuscations.

SLOPPY LANGUAGE: A SLOPPY LIFE

Wittgenstein is famously the author of the remark "To imagine a language is to imagine a form of life." And the philosopher Stanley Cavell has written about how a child who can say "pumpkin" in the right place, but can't yet say "mayor" or understand what it means to answer the question "Where do you live?" with reference to a map, is not yet ready to enter or share certain forms of life. A three-year-old can go for a ride on the train with me but can't pass through New York with me on the train from New Haven to Washington D.C. without the concept of "cities," "passing through," and so on. That is not a reason to stop talking with the three-year-old about cities.

One passion that drives great poets is the awareness that a sloppy and truncated language is a sloppy and truncated form of life, and that the sloth and limitations in question are dangerous. There are now, especially, dangers that are a consequence of the superstition I call "mechanomorphism," a superstition that leads to the delusion that there can be a (human) word with only one meaning, and a (human) meaning with only one word.

Poet **Vicky Hearne** *has taught English literature and writing at the University of California and at Yale. She currently works as a trainer of dogs and horses. She has written a philosophical book on animals and language, called "Adam's Task: Calling Animals By Name" (US hardback: Knopf; UK hardback: Heinemann; US paperback: Vintage).*

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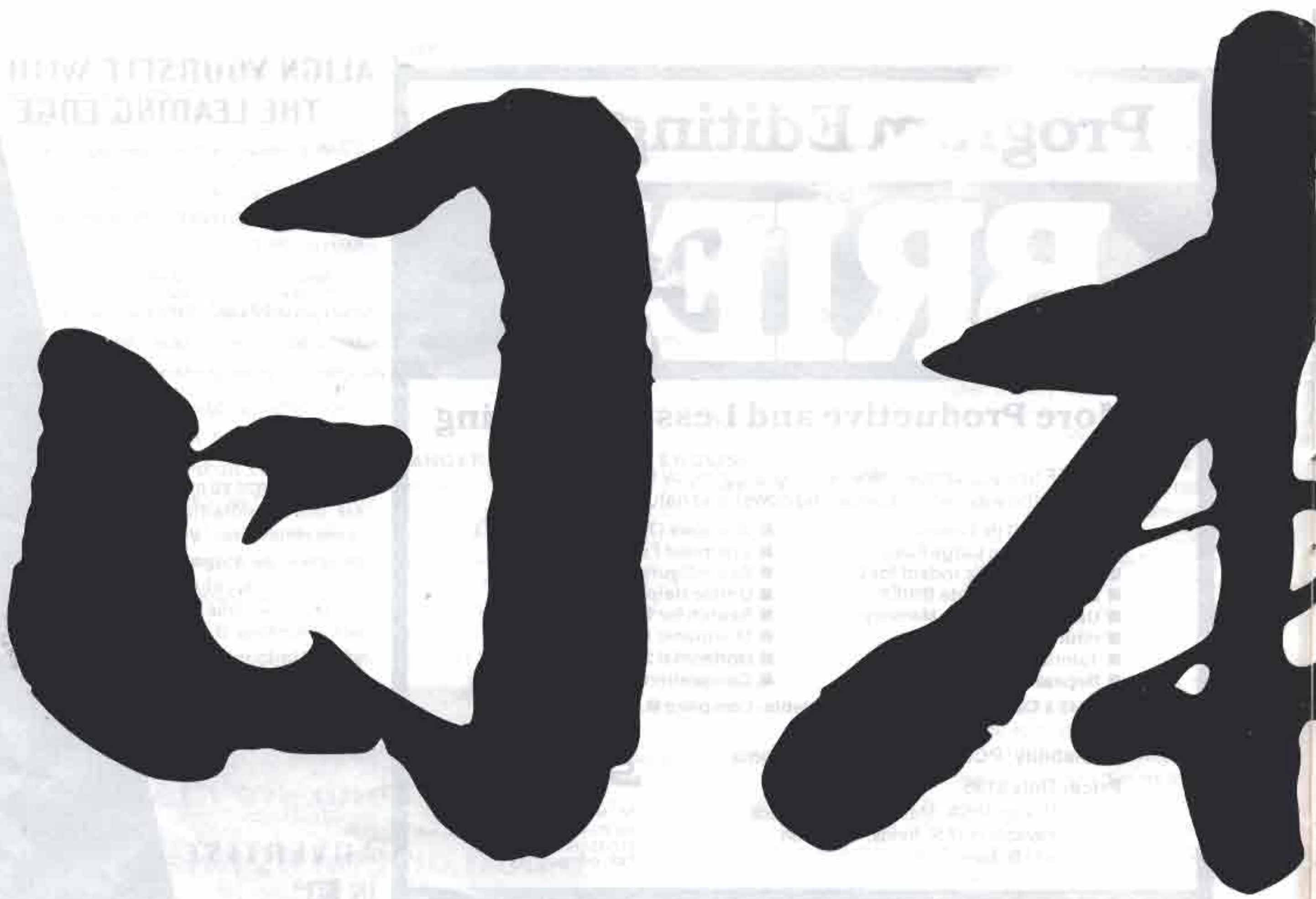

WAPURO

WORDWORKING, JAPANESE-STYLE

By Bruce Haase

Four writing systems, thousands of characters, several completely different pronunciations for each character, but only ten fingers . . . Attempts by the Japanese to automate their orthography have always tripped over this first and fatal stumbling block. After a thousand-year wait for a faster way to write things down, the *wapuro* (simplified Japanese pronunciation for "wordprocessor") has finally come to the rescue. Now the problem is what to do about the wapurobaka — the wordprocessor "idiot."

Some 1500 years ago, the Japanese came round to the idea of getting what they were saying on paper. So, as in all things – from rice planting to religion – they looked to their neighbors the Chinese. They should have known better. Chinese is uninflected and tonal. In contrast, Japanese *is* inflected, non-tonal, and quite unlike Chinese. They couldn't have made a worse choice. But made it they did, and they've been stuck with it ever since.

The Japanese began by borrowing lots of Chinese characters, which they called *kanji* and retained intact for their pictographic or ideographic value: those for *tree* (木), *mouth* (口), and *speaking* (言), for example. In addition, for each character they borrowed, they also borrowed a Chinese word. The result was that they soon got used to pronouncing each kanji character using either its corresponding native Japanese or its – Nipponized – Chinese name. Even today, practically every kanji character has at least two distinct pronunciations or "readings" – one Japanese and one Chinese.

Since those first fateful borrowings, the dupli-

cation has continued. Using kanji as a base, beginning in the 7th century, the Japanese developed two parallel phonetic writing systems with 46 symbols each to represent the 46 possible syllabic vowel-consonant combinations in the language. In these two systems – *hiragana* and *katakana*, together known as *kana* – each character represents a complete syllable. Hiragana started life as the orthography of educated women. Chinese writing, with more than 40,000 pictograms, was considered too difficult for the weaker sex (and the first Japanese novels were written – by women – in hiragana). Katakana was developed later, as a shorthand, by Buddhist monks.

Hiragana and katakana were introduced to supplement, not replace kanji. In modern Japanese, hiragana is used for inflection – mainly verb and adjective endings indicating tense and level of politeness – and katakana is used for foreign loan words, onomatopoeic words, emphasis, and sometimes for female names. Sound confusing? Good, that was the point. Written language was traditionally the property of the leisured ruling class. And they invested a great deal of energy to keep it that way.

SIMPLIFICATION, WELL, SORT OF...

"Why though," you may wonder, "in a country that is now one of the most literate in the world, do they persist with this orthographic mishmash?" Why don't they just stick to kana? Or even ditch the whole mess and adopt the Roman alphabet, like the Turks, Vietnamese, and Malaysians before them?"

Who knows? It could be because in their own script, they're not used to putting spaces between words. Or it could just be that they like things the way they are: that they're emotionally attached to their own quaint ways. Maybe reading Japanese in a Roman script is like reading Shakespeare in the International Phonetic Alphabet – a bit sterile-looking. After all, we Anglophones – attached as we are to the eccentricities of English spelling – are no paragons of rationality when it comes to orthography.

There may be, however, another more practical explanation: the large number of homonyms (words that sound alike but have different meanings, like bear and bare) in Japanese. And the villains of this piece are all those Chinese loanwords. Not only does Japanese have fewer units of sound, or phonemes, than Chinese. Its lack of the four *tonemes* found in Mandarin Chinese means that yet another layer of distinction is lost. The Chinese word "ma," for instance, can mean "horse," "scold," "mother," or "hemp" depending on the tone. In Japanese, as in English, all four sound the same. And though context clears up most ambiguities, the Japanese find texts written in only kana harder to read and colorless.

1946, with Japan in shambles, seemed like a good time to tidy things up a bit – including revamping the orthography. Proposals ranged from abolishing kanji and kana to making French the official language. The American-backed government finally settled on simplification. It ruled that in addition to kana, only 1,850 of the thousands of Chinese characters, and a limited number of readings for each character, should be used in everyday writing. Everything else would be written using kana.

Needless to say, Japanese typewriters don't look like your typical Smith-Corona portable. Trays of thousands of metal character blocks have to be loaded into the machine before typing.

TYPING JAPANESE

However much simpler Japanese writing has now become, there's still a huge difference between the

The automation of words that the West first experienced in the early seventies, is only now hitting the land of the rising sun. In Europe, the progression from writing through typing to wordprocessing has followed a gradual evolution. Japan, on the other hand, has been catapulted from brush pen and paper to the world of harddisks and wysiwig graphics integration in just a few short years.

2,000 odd characters Japanese is now reduced to and the 26 Roman letters of English. Needless to say, Japanese typewriters don't look like your typical Smith-Corona portable. Trays of thousands of metal character blocks have to be loaded into the machine before typing. Kanji characters are organized according to their Chinese readings, of which most have two or three. In addition, the many Chinese readings with homonyms are represented by as many characters as there are homonyms.

Let's say, for instance, that you want to type the word for "interesting:" *omoshiroi*. It's made up of two characters: *omo* ("surface") and *shiroi* ("white"). To type it, first you have to find the Chinese reading for "surface," which your years of study tell you is *men*. Next, you have to read through the characters for *men*, until you find the one meaning "surface."

Now "white," or *shiroi*. The Chinese reading: *haku*. You search through the several kanji characters for haku until you find the one meaning "white." But, you're not done yet. "Interesting" requires the adjectival ending *i*. This should be written in hiragana. Go to the hiragana section of the typewriter, type in *i*. And that spells *omoshiroi*. Interesting? Not if you have to do it all day. All that effort for just one word. Little wonder that nearly every Japanese beats a hasty retreat to pen and paper.

HIGH TECH

Enter technology. Computers were the obvious solution to relieve Japanese wordworkers of this drudgery. The biggest problem, though, was that computers had been developed in the West, by the West, and for the West. And by the early seventies, the Japanese computer industry realized that if the nation was not to be forced into writing its language in a framework designed for West Europeans, it would have to develop its own wordprocessing system: a system that would make it possible to produce texts much faster than either manually typed or handwritten ones.

And develop it they did. Among others, Tokyo University had some success in the development of Japanese interfaces for mainframe systems, but nothing that could be marketed. The systems developed were too big, too unsophisticated, and above all, too expensive.

Creating a dedicated Japanese wordprocessor – wapuro – was no easy task. 128 ASCII character slots divided by 2,000 just won't go, no matter how bad your maths is. First of all, developers had to figure out a way to store all the kanji characters efficiently, leaving the tedious searching to the computer. The computer would have to be able to cross-reference each kanji character by all its various readings, as well as know which character combinations were possible for particular words and phrases.

Accessing kanji characters was another problem. Since all Japanese words can be expressed in hiragana, this phonetic system provided a workable bridge between the typist's ten fingers and thousands of characters. Hiragana also had the advantage that most Japanese felt comfortable using it – unlike the Roman alphabet. Since there are only 46 hiragana characters, they could be integrated into a slightly enlarged standard keyboard.

Yet another problem was output: printers and screens. A 5 x 7 pin block is fine for A to Z. But 24 x 24 is the bare minimum for good readable Japanese, and many wordworkers even find that a bit crude, thus setting the 48 x 48 pin printer well on its way to becoming the standard in Japan.

However, all these difficulties were eventually overcome. In the fifth month of the 53rd year of the Showa imperial reign – May 78 – the first wapuro was brought out by Toshiba. The JW-10 was considered a wonder for its time. Large and clunky, with little flexibility, it was a bargain at just 6,300,000 yen (US $50,000). Since Toshiba's starting shot, the race for first place in the Japanese wordprocessor market has been frantic. Between 1984 and the end of 1987, annual unit sales rocketed from 224,000 to 2.4 million.

FEWER KEYSTROKES

The standard wapuro allows you to type in your text either directly in hiragana, or in Roman which is then automatically converted into hiragana. Then you press a button, and, where appropriate, the hiragana is converted into kanji. The most advanced wapuros also offer context-sensitive automatic kanji conversion. The problem of homonyms is drastically reduced by typing in whole words or phrases. In the "interesting" example, although both kanji characters in the word have several different readings, there is only one combination of characters that fits with *omoshiroi*.

The wapuro also recognizes verb and adjective endings. So in the case of "interesting," the wapuro not only knows that *omo* and *shiro* should be in kanji. It also knows it must keep the adjectival ending *i* in hiragana. In the case of verbs, it converts the stem into kanji, while leaving the inflection in hiragana. If the proper character is not displayed the first time you press the kanji conversion key, you can press it again until the proper character appears. For the diehard sinofile, a graphic tablet lets you reproduce any of the 40,000 odd Chinese characters, theoretically fair game for Japanese though not found in the standard post-1945 Japanese set.

Since each hiragana character represents a syllable, typing it in involves far fewer keystrokes than the Roman alphabet. To return to our "interesting" example, on a wapuro, *omoshiroi* requires just six: o + mo + shi + ro + i, plus the kanji conversion key. Contrast this with the eleven keystrokes required to type its English equivalent.

TODAY'S MARKET

With the advantages the wapuro offers over both typing on a manual machine and writing by hand, no wonder the Japanese have taken to it like samurai to sushi. The major obstacle was overcoming kanji.

Creating a dedicated Japanese wordprocessor – wapuro – was no easy task. 128 ASCII character slots divided by 2,000 just won't go, no matter how bad your maths is.

and once that had been achieved, the market exploded. The market leader is Toshiba, closely followed by Sharp, NEC, Canon, and Fujitsu. Toshiba's Rupo series has already topped the million unit mark. Just four years ago, the standard screen was one line of eight characters – flexibility pushing nil. Since then, all the major Japanese companies have been doing what they do best – releasing product after product with more features for less money in smaller packages.

Toshiba's latest laptop model gives even western manufacturers cause for concern. Weighing just 5.5 kilos and about the size of a typical briefcase, the rechargeable Rupo 90F II features a built-in 24 x 24 dot printer, a 40- or 80-character by 20-line backlit screen, advanced graphic functions, a 130,000-word kanji dictionary, a foreign-word dictionary, built-in maths functions, an optical scanner, and PC communications capabilities. Western language capabilities like proportional spacing, autofill, and even acute accents and umlauts are also featured.

Determined not to be left behind, NEC recently introduced the 48 x 48 dot printer and a slew of built-in type styles. There is even a calligraphic style font, which prints characters as if they were written with a brush.

NEC is also working on a newly designed – ergonomic – Japanese keyboard, which divides the syllabic kana characters into their constituent parts, with vowels on the left and consonants on the right, as well as syllable combinations on single keys. Designer Masasuke Morita comments: "The layout of the traditional keyboard was dictated by the structure of the mechanical typewriter. Today's electric typewriter with an on/off connection for each key has made that layout meaningless."

This new design could reduce keystrokes by up to half. Morita: "Many experienced operators have achieved a speed of 100 characters per minute, and highly skilled operators have reached 165 characters per minute." This is double the speed of standard systems.

Fujitsu has taken a different approach to redesigning its keyboard. Making use of the shift key, they have been able to put all the kana characters onto the bottom three rows of the standard Western keyboard, whereas most wordprocessors use four rows. This makes it possible to use more traditional typing techniques, while still directly inputting kana. Fujitsu is also the only maker that markets wapuros in the United States.

Canon has introduced its all-in-one work station with telephone, wordprocessor, computer, and fax in one small box, it handles everything but your morning cup of coffee. The scramble to one-up the competition has also led to a number of – well, to say the least – esoteric functions: Toshiba's golf score program or NEC's online mahjongg package are just two examples of the anything-to-be-different mania.

LAUGHING LAST

The automation of words that the West first experienced in the early seventies, is only now hitting the land of the rising sun. In Europe, the progression from writing through typing to wordprocessing has followed a gradual evolution. Japan, on the other hand, has been catapulted from brush pen and paper to the world of harddisks and wysiwig graphics integration in just a few short years.

According to Carole Rayavec, an analyst for Salomon Brothers, a US financial services company in Tokyo, "Computer peripherals, such as terminals and printers, have been a priority for redesign by the Japanese manufacturers." Japanese companies are finding that the research that went into the development of the wapuro has applications in the West as well. "Major players like Toshiba and NEC are producing 10-percent improvements in turnover, and profit rises of around 50 percent, as they increase their penetration of world markets."

TRANSLATORS ET AL

Takufumi Yamaguchi, a translator into Japanese from English, Norwegian, Swedish, and Danish, has been using a Canon wapuro for the past five years. Describing the wapuro-induced revolution, Yamaguchi comments: "Five years ago, practically no one used wordprocessors. Today, one would be hard pressed to find a translation agency that still accepts handwritten work."

"In an area like translation, where a large number of revisions are often required, the ease and efficiency of wordprocessing means hours less work every day. Speed and clarity are both increased exponentially."

Japan may have gotten a late start with electronic words, but in a short time, they have out-automated most of their western counterparts. Japanese translators often take better advantage of the electronic medium. Yamaguchi: "Using a modem, I can consult with other translators and clients as well as send and receive projects."

Not just translators, but everyone from secretaries to managers are taking advantage of the new wave for words. In addition to the speed advantages specific to Japanese, wordprocessing features that are old news in the West, are just beginning to be offered in Japan. Personalized form-letters and cut-and-paste are the best thing since Tippex on the Japanese market. A Japanese secretary beamed excitedly as she described the electronic marvel: "It's so much faster. Features like centering and underlining are great timesavers."

For the Japanese, handwriting is still considered a sign of character. With wapuro, one can safely hide behind the anonymity of 24 x 24 dots. An office worker comments: "We produce a bimonthly newsletter in our office. There are usually three people who work on it. Three different handwritings gave it an unfinished look. With the wordprocessor that's no longer a problem."

"WHO'S CHANGING WHAT?" OR "WHAT'S CHANGING WHOM?"

It is clear that wordprocessing is having a profound effect on the way the Japanese work with words. Less obvious, but perhaps more interesting, is the way that this revolution is affecting the Japanese language itself.

The elaborate nature of Japanese characters means that there's a tremendous gap between reading ability and writing ability. In English, if we don't know how to spell a word, we can at least guess. In Japanese, if you don't know a kanji character, you're stuck – unless of course you have a dictionary or a wapuro. Because text is entered phonetically, either in hiragana or Roman, anyone using a wapuro can reproduce any word that they can read.

Until the wapuro, many people considered kanji to be doomed in the modern information age. Computers printed out mailing lists in the simple and angular katakana. Now, the wapuro and the technology behind it, have given kanji a new lease on life.

However, as in every age, there are the traditionalists. Many people see the easy access to written Japanese that the wapuro offers as a mixed blessing. They fear that wapuros will create a generation with only a passive knowledge of its language. The word *wapurobaka* – literally word processor idiot – has become a household word in Japan to refer to the young office worker who has become so used to wordprocessors that he's forgotten how to write properly. It's not unusual to see a middle-aged person shake his head sadly at the sloppy misformed characters of a young businessperson/wapurobaka.

Similar to Western arguments about calculators in maths class and spellcheckers for English papers, the kanji question cuts much deeper. From the ages of six to fifteen, Japanese schoolchildren typically spend many hours a week copying characters over and over to memorize them. How will teachers justify this tedious task to a generation that knows that it can do it faster and better with just the push of a button?

For the Japanese, writing has academic, artistic, even religious and nationalistic connotations. Little wonder that automation is met with mixed feelings. It is difficult to say exactly what the longterm effects of the wapuro will be on the Japanese language and the nation's attitude toward it. It is clear, however, that neither will be the same again.

Staff writer ***Bruce Haase*** *has extensive experience with computers, worked as a technical writer and has lived in Japan.*

Canon Inc., *30-2 Shimomaruko, 3-chome, Ota-ku Tokyo 146. JAPAN*
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Mr. De Benedetti, here's tec

These days, the Italians enjoy a reputation for excellence in techno-cultural performance: fashionable design styles, award winning film productions, new entrepreneurial elan...
The latter has given them a lead in the European office computer market.

Fortunately, the strategies of Milanese business peers as well as the architecture of Italian-made computer systems are directed towards *openness*.
Openness to foreign ventures and new markets, to working together with companies or systems abroad.

There's just one flaw in this trend-setting connectibility: *language*.
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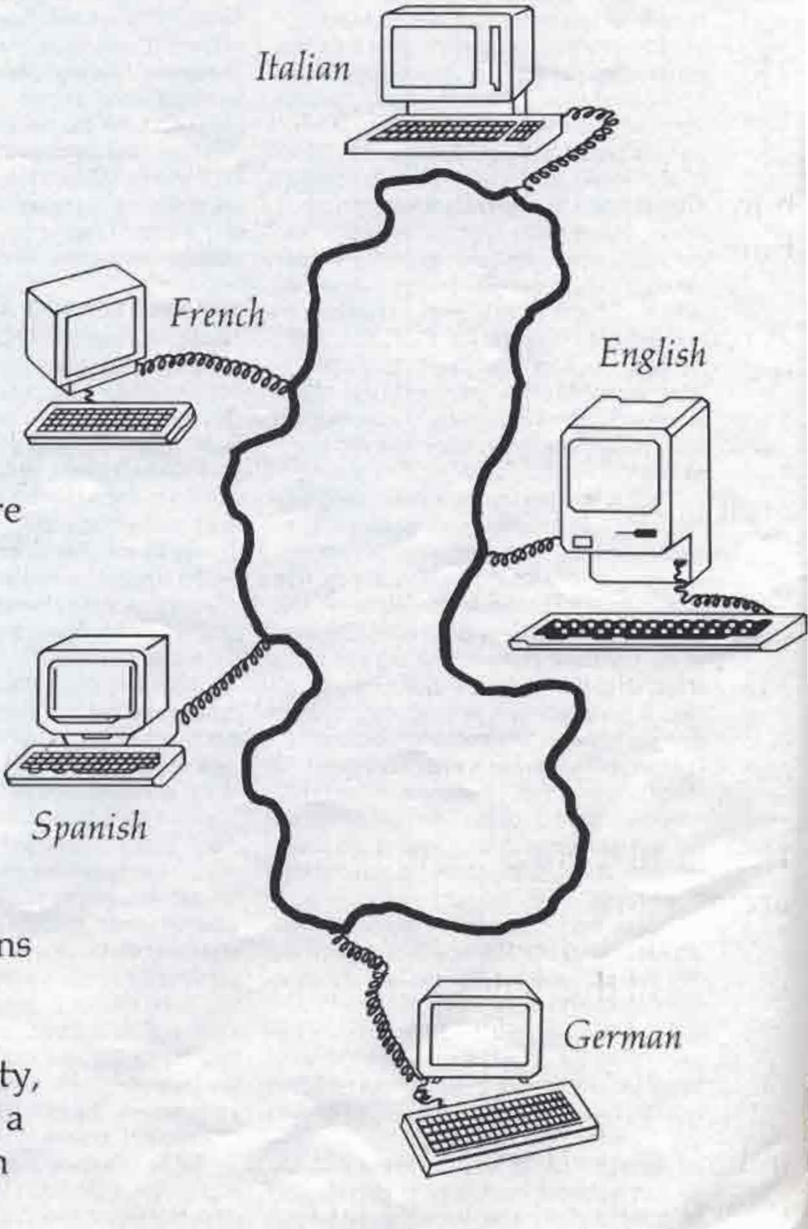
In the post-industrial information society, this could become quite a handicap for a country now rated as the world's fourth capitalist economy.



The system depicted above is the high-tech solution for language versatility.

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This system is called *DLT (Distributed Language Translation)*, and it's designed for fast operation on the personal computer hardware of the 1990s – unassisted by human translators or bilinguals.

A prototype is under development at BSO/Research Labs in the Netherlands, a country near the cross-roads of the major EEC languages, and with a reputation for multilinguality.

The *DLT* project is a costly and long-term venture: no release can be expected on the market before the mid-1990s. But then, *DLT* represents a quantum leap over current machine translation software:

First of all there is the fully interlingual architecture, the most ambitious in the field, where stream-lined Esperanto plays the role of the invisible intermediary.

At the same time, this architecture harbours distributed Artificial Intelligence with an unlimited expansion capability, supporting high-quality translation of a diversity of technical and business texts.

And what's more, construction of the *DLT* system is managed as an industrial process, not as an exercise in model-theoretic linguistics. Despite its pioneering character, BSO has succeeded in keeping this project on schedule and within budget – ever since 1984.

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Illustration by René van Asselt

CALL

COMPUTER AIDED LANGUAGE LEARNING

by John Underwood

COMPUTER-AIDED LANGUAGE LEARNING (CALL) MIGHT BEST BE DESCRIBED AS "WORK IN PROGRESS." IT STILL ENCOMPASSES LITTLE MORE THAN A MOTLEY ASSORTMENT OF PRODUCTS AND PROJECTS, MOSTLY EXPERIMENTAL, WHOSE IMPACT ON THE LANGUAGE-TEACHING PROFESSION IS STILL UNCLEAR. YET, SAYS JOHN UNDERWOOD, ITS PROMISE TO ACHIEVE REAL BREAKTHROUGHS IN THE WAYS WE LEARN FOREIGN LANGUAGES IS UNDENIABLE.

The classic enthusiast's approach to CALL is to point to the undeniable advantages digital technology offers over traditional supplementary learning aids such as the workbook and audio language lab. The computer is interactive. The student responds to it and gets immediate feedback: either positive reinforcement for a correct response, or notification of a mistake. The computer is capable of error analysis: identification and explanation of the source of error, which in turn allows for self-correction. And of course, the computer is inhumanly patient with the student, who may go over material as much as s/he needs to – in privacy, without the stigma of being singled out as the class dunce.

This somewhat pedestrian image of the computer as a benign stimulus-response device is a legacy of the limitations of microcomputer technology in the early 1980s. Since then, technological changes in both the hardware and software fields have altered the picture radically.

Interactive (or computer-accessed) video, for instance, can create a life-like environment in which the student can both understand and use language. Hypermedia authoring systems designed for the easy integration of text, graphics, audio, and video, allow program designers to create rich, multi-layered language teaching systems that would have been impossible with the standard microcomputer approach. And research in the branch of artificial intelligence known as natural language processing (programming computers to "understand" human language) has led to experimentation in the use of intelligent parsing programs as part of CALL systems.

PROBLEMS AND CONTROVERSY

Behind this typology of language learning programs lies a continuing controversy concerning the appropriate way to use computers for language practice – if at all. From the outset, endeavors in CALL have been characterized by an unusual level of self-criticism in the profession.

Part of the problem has been an understandable lack of standards or guidelines to give direction to program developers. Moreover, software has

THE APPEARANCE OF INTELLIGENT INTERCHANGE IS USUALLY JUST THAT – MERE APPEARANCE. THE PROGRAM MATCHES FOR CERTAIN KEY WORDS IN THE STUDENT INPUT AND WOULD BE INCAPABLE OF MAKING SENSE OF MUCH ELSE. THE COMPUTER'S CHATTY RESPONSES, ON THE OTHER HAND, ARE CANNED PHRASES STORED FOR THE APPROPRIATE OCCASION.

often been written by language teachers who lack a sophisticated view of the potential of the computer, or by computer scientists or programmers who are equally naive regarding the proper form of a language exercise. The result in many cases amounts to programs that either make trivial use of the computer or accomplish no identifiable instructional purpose.

A key issue revolves around the notion of context in language use. Language learning theory stresses the importance of practicing linguistic elements in a meaningful, global, context rather than as unconnected strings of words or lists of sentences. However, it has proved difficult to program language exercises in anything like a meaningful context. The result is often a sort of regression to the drill-based practice of an earlier era.

To some in the profession, this alone has been enough to turn them away from CALL. Others feel that the role of the computer is precisely to serve as a source of form-centered – as opposed to meaning-centered – practice for those who need it. As British program developer Graham Davies puts it: "The computer can relieve teachers of much of the drudgery and release them to concentrate on communicative skills." A third group has set out to devise ways to make CALL exercises more meaningful.

EXPERIMENTS IN MEANINGFUL CALL

There have been several approaches to bringing meaning into CALL activities, from the trivial, such as requiring students to choose the appropriate verb stem to fit the context before conjugating a verb, to the complicated – using syntactic and semantic parsing routines to allow students to answer questions freely. In between, we have seen some highly original, if not necessarily fruitful, experiments.

In both the U.S. and the U.K., for example, researchers have experimented with using programs based on the famous *Eliza* program, designed some twenty years ago to simulate the role of a psychiatrist in a consultation. Since *Eliza* uses a pattern-matching strategy rather than true parsing, there are many utterances it cannot recognize, forcing it to hedge, with its now-famous "Please go on" and "In what way?" When used for language practice, this strategy raised yet another controversy: is it appropriate for a program to understand the student and recognize the student's errors only ninety percent of the time at best?

One response to this problem has been to create programs that operate in a very limited domain, requiring equally limited vocabulary and structure, thus enabling the computer to recognize with confidence a much higher percentage of student input. Much of John Higgins' work at theBritish Council has been of this sort, in addition to a certain amount of work in the U.S.

One such project that this author has worked on is a set of Spanish problem-solving games known as *Juegos Comunicativos*. The concept behind the program is to have students use Spanish sentences to perform certain tasks, then to parse their input and determine both its grammaticality and appropriateness to the environment.

The program consists of two fairly separate components: a language-independent parsing program, and a set of language-specific data files in which word classes, morphological rules, syntactic patterns, and semantic attributes are specified for the benefit of the parser. The program's ability to parse intelligently depends on an environment limited to that of the miniworld displayed on the screen, plus certain rules regarding the range of permissible structures.

A typical activity is the game *Las cinco diferencias*. Two pictures are displayed side by side on the screen, identical except for five unambiguous differences: door on the house/no door on the house, big car/little car, dog/no dog, etc. The student is instructed to describe the five objects that are different in the righthand picture by using the verbs *ser* (to be), *tener* (to have), or *hay* (there is/are, etc.).

With each input sentence, the program parses from left to right to see if it can recognize a pattern. If it can, the parser then checks the elements in that pattern for problems of gender/number agreement, missing words, etc. If problems are detected, the questioned words are highlighted and a canned message displayed to give the student a hint as to the nature of the problem (*masculino o femenino?*, etc.).

If no syntactic problems are found, the program checks the lexical content of the input sentence to see if it agrees with the semantic attributes for that particular picture. If semantic anomalies are detected, messages are again displayed. The following is an English translation of the Spanish dialogue that might accompany one of the pictures. Numbers are for reference, computer feedback in boldface:

1. The suitcases are bigger (más grande, singular)
2. **Singular or plural?**
3. The suitcases are bigger (más grandes, plural)
4. **You're right.**
5. There is a window.
6. **How's that . . . ?**
7. There is a window on house.
8. **The article is missing.**
9. There is a window on the house.
10. **Yes, but that's not a difference.**
11. There are two dogs near the house.
12. **I only see one.**
14. You're right . . .

The program is of course not prepared to give an intelligent response to every possible student sentence, even in this limited microworld. When faced with totally unexpected, yet parsable, nonsense such as *Hay una casa en el hombre* ("There is a house in the man"), the best the program can offer is *¿Cómo?*, which the user takes to mean roughly "That's good Spanish, but I don't get it." And the Spanish structure in line 7, *Hay una ventana en casa*, is technically correct – in another, irrelevant, sense – but the program does not know that, either.

All the same, there is much the program does know, as should be clear from most of the responses above. The point is that given a limited domain such as this, and with certain structural restrictions, it is possible to design a program that demonstrates a certain intelligence most of the time. And given that the aim of such a program is to provide a means for students to explore how sentences are built in Spanish, rather than submit them to a rigorous test of their own grammatical knowledge, that "most of the time" may well be sufficient.

WE WOULD HAVE INTERACTED (IF WE'D HAD ONE OF THESE AT SCHOOL)

It is usually risky to predict the future, especially in a field that changes as rapidly as this one. Nevertheless, a few significant trends are beginning to take shape that are causing CALL to take on a new look and acquire a new importance: so-called hypermedia systems, interactive video, intelligent microworld systems, and the use of digitized audio. As with the rest of the densely interconnected world of electronics, none of these new technologies is entirely independent of the others. In fact, they may not be separate technologies at all, but mere components of what may prove to be the intelligent language learning system of tomorrow.

HYPERMEDIA SYSTEMS AND INTERACTIVE VIDEO

The notion of hypermedia comes from the earlier concept of hypertext: text on the screen that can somehow open up or zoom in to reveal further information about the words or the topic. Hypermedia includes access to other media: audio, video, graphics, and animation. Clicking on a word can thus result in any number of responses: a different screen of text, the pronunciation of a word, a graphics picture, a full-color video still frame, or a segment of full-motion video.

There are now a number of hypermedia authoring systems on the market that enable instructors to create such programs with relative ease. The most important feature of such systems, however, may well be the way in which they facilitate the production of interactive video.

Interactive video normally uses a videodisc player, since it can provide almost instant random access to any of the approximately 60,000 images on the disk. What distinguishes interactive video

WE POSITIVELY REINFORCE

An overview of CALL techniques

Most current CALL applications fall into one or more of the following categories: drill-and-practice programs, tutorials, simulations, games, and tool programs.

DRILL-AND-PRACTICE

Drill-and-practice consists of the mechanical manipulation of words or sentences, using exercises similar to those used in class or the language lab: analogy drills (stimulus: *I'm going to the swimming pool. And John?* response: *John IS going to the swimming pool*); mutation drills (changing statements to questions, affirmative verbs to negative ones, the present tense to the future . . .), fill-ins, etc. The pedagogical value of such programs depends largely on the quality of the error analysis they use, if any. Early programs often responded with little more than "Sorry, try again."

A typical drill-and-practice exercise might look like this:

Instruction

Answer the questions with pronouns, as in the model.

Model

Stimulus: Was that call for Harry or for me? (Harry)
Response: It wasn't for you, it was for him.

Exercise

1. S. Are you going with Sally or with us? (Sally)
   R. I'm not going with you, I'm going with him.

Correction: Use the feminine pronoun.
R. I'm not going with you, I'm going with her.

2. etc.

Note that the student's attention is focused on the form of the words rather than on their meaning, and that the feedback from the program is likewise phrased in terms of form, as opposed to something like "I thought you were going with Sally."

TUTORIALS

The tutorial differs from drill-and-practice in that it takes the student through a certain amount of explanatory material before proceeding with exercises. In the best of cases, this explanation will be interactive in nature, requiring the student's response to confirm understanding on each point. *Early tutorials tended to be more like electronic* page-turners – sequences of mostly static screens of text – with the student a passive observer on the other side of the screen.

More recent tutorials exploit the computer's power to create dynamic illustrations with animation, graphics, and color. The concept is the same: give the student a chance to understand the point before going on to practice. Consider, for the sake of comparison, a tutorial introduction to the drill-and-practice item above. In the dialogue, the computer's comments are in bold face:

Look carefully at the following question and its answer:

Was that call for Harry or for me?
It wasn't for you, it was for him.

Which pronoun in the answer replaces HARRY?

> him

Right. Is that a masculine or feminine pronoun?

> masculine

Good. What pronoun would you use for MARY?

> she

SHE is a feminine pronoun, but can you say "It was for SHE?"

> no

OK. Complete this sentence about Mary: The call was for ...

> her

Good. Now try this exercise . . . (as above)

The appearance of intelligent interchange is usually just that – mere appearance. The program matches for certain key words in the student input and would be incapable of making sense of much else. The computer's chatty responses, on the other hand, are canned phrases stored for the appropriate occasion.

SIMULATIONS

Just as air pilots learn to fly in computer-controlled flight simulators requiring them to use real piloting skills, the language student can participate in a make-believe world in which s/he must use the target language to get by. At the simplest level, this microworld exists only in text on the screen. More elaborate versions use graphics or even videodisc to simulate their special reality.

One of the most elaborate simulation projects is *Montevidisco*, an experimental videodisk simulation for Spanish developed at Brigham Young University. Specially shot footage of a Mexican village allows the student to use the computer to explore the town, choose to go one way or another, and "talk" to the natives – that is listen as they turn to speak to the camera, then choose from a list of responses. The student immersed in a simulation of this sort is understanding and using language in a meaningful context rather than focusing on the form of the words.

GAMES

Closely related to simulations are the many game programs that require students to use the foreign language to achieve a certain goal: unravelling a mystery, completing an imaginary trip without spending all their "money," or problem-solving. For example: "Tell me how to get from the station to the hotel" or "How is this picture different from that picture?"

One foreign-language game displays pictures on the screen of various rooms in a mysterious house and challenges the student to solve the mystery. To open doors, *move from room to room, or pick up objects, the player must* give coherent instructions in French. Unfortunately, the program's own French is extremely limited, and sometimes embarrassingly wrong.

TOOL PROGRAMS

The term "tool" here refers to software designed for language-related purposes other than CALL – wordprocessing and computer-aided writing programs such as spelling and style checkers, etc. – but which can nevertheless be useful to the language student. Wordprocessors, especially those that include a foreign-language dictionary, can clearly do much to help students refine their writing skills, spelling, punctuation, and so forth.

Similarly, a database program could be used as a reference tool, perhaps as a source of information about grammatical forms. Several U.S. colleges have begun using their campus computer-mail system to have students practice writing and "mailing" short compositions to each other and to their instructor. The medium of electronic mail seems to encourage students to write more freely and to use a wider range of language functions such as requests, complaints, and confirmations in their messages.

from simple linear (VCR) video is the wealth of access it provides into the material. The student uses the computer to control the flow of the images: to back up, repeat, or jump ahead; to ask for subtitles or key words to appear on the screen; to consult help screens, comprehension questions, or translations. Some foreign language video programs offer the option of a second audio track containing a more carefully pronounced and noise-free version of the dialogue.

With a hypermedia system, this type of interaction may be combined with overlaid or separate graphic images, so that the student can invoke a particular segment of video by merely clicking on a corresponding visual symbol or icon. Or a particular line of dialogue can be played and replayed with nothing more than a click on that line of script on the screen. In this way, the student concentrates on understanding the story and the language, with little or no concern for the mechanics of access.

ARTIFICIAL INTELLIGENCE: MICROWORLDS

Artificial intelligence (AI) is that area of computer science in which machines are programmed to simulate behavior normally considered to require intelligence. Human language is one such area of behavior. To create a system which can recognize and understand, even only partially, the many layers of language structure – sounds, words, sentence structure, semantics, etc. – requires extremely complex programming.

For this reason, many researchers are experimenting with natural language programs that focus on a single limited aspect of language: the "limited domain" discussed above. One of the most elaborate experiments in the use of AI in CALL is currently under development at the Massachusetts Institute of Technology. Known as Project Athena, the MIT undertaking is intended to provide a model of what can be achieved in CALL through the use of the best technological resources available.

One of the MIT system's components, *Lingo*, combines a sophisticated parsing system with an elaborate microworld portrayed on a color monitor. The prototype features a German conversation between the student and a poltergeist, adept at messing up the room visualized on the screen. A sample dialogue, in English translation, looks like this. Computer output in boldface:

What should I do?

You should tell me where the glass is.

The glass is on the table.

Try laying it inside the fridge, please.

Very good. I have laid the glass in the refrigerator. Now what should I do?

Tell me where the book is.

I don't know which book you are talking about.

The red book.

The book is lying on the bed.

OK, put it upside down under the bed ... etc.

With each instruction the student gives, the graphics system rearranges the images on the screen to correspond. The student's attention is focused on these images and how language affects them, making the dialogue an authentic goal-oriented interchange.

The artificially intelligent system underlying *Lingo* is being designed to be both generic and modular, so that it can be used either as a whole or in parts to support a variety of applications. The basic language-processing procedures – morphological recognizer/generator, parser, case frame interpreter – are language-independent.

Other modules contain language-specific rules regarding the lexicon, morphology, and syntactic patterns of the languages being dealt with in the project: Russian, Spanish, French, German, and English as a Second Language. Still other components, such as those pertaining to knowledge representation – the way the system is made to understand the "world" around it – are entirely independent of any linguistic information.

DIGITIZED SPEECH

A feature regularly lacking from dialogue programs is the capacity for either the student or the computer to use speech instead of typing. The ability of AI systems to understand spoken language is still quite primitive. But even if the student cannot yet speak and be understood, the system itself can be programmed to "talk" on cue.

There are two basic approaches to computer-talk: digitized speech and synthesized speech. Digitized speech is high-quality "canned" audio, produced by converting real speech into digital code and then back into analog wave patterns for output. Synthesized speech begins with the code itself, generated by a computer program using phonetic rules; this code is then processed in the same way as the code for digitized speech. The advantage of synthesis is that it allows the device to generate on demand whatever utterance might happen to be needed. The disadvantage is that it does not usually provide a sufficiently accurate model for a student trying to master foreign sounds – especially intonation patterns.

Digitized audio can be stored in the same form as computer data, on the computer disk itself, on a CD audio player, or even on a mass-storage CD-ROM player. Whatever the storage device, a segment of audio data can be accessed instantly, decoded, and played back whenever needed. Though these segments are necessarily "canned," the amount of memory storage on today's harddisk storage systems or the new CD-ROM allows for the storing of a virtual library of words, phrases, and sentences.

In a hypermedia system, for example, these pre-recorded segments could be used to provide audio reinforcement: clicking on a word might invoke a still video image accompanied by a segment of audio describing it. Or a grammar practice program could draw from a variety of possible phrases that could be used as feedback for the student's answer – one more way to simulate a more meaningful linguistic exchange.

NEW TOOLS

Scarcely ten years old as a microcomputer application, CALL has already passed through a shaky adolescence into hesitant maturity. Much of what was attempted with computers in the early years amounted to little more than imitating their immediate predecessor, the audio language lab. In its own turn, the lab had been designed to reinforce the practices of the form-centered, drill-based methods of the times, notably the so-called audiolingual method. Understandably, developers faced with a new medium tend first to produce what is most familiar, most obvious, or easiest to do.

However, this attitude has now given way to the realization that computers and computer-related media are radically different from anything we have used before, and that these differences require a new way of thinking about the relationship between student and means of delivery. The instant-access environment created by a hypermedia system, for example, cannot be reproduced in any other medium.

How can that environment best be exploited? How much control should the student have? And how many decisions should the program make for him? It will probably be some time before we have clear answers to these questions. Yet this author is convinced that we are beginning to create language-learning tools like no others we have had: tools that will ultimately change the way we think and feel about learning a language.

THE MEDIUM OF ELECTRONIC MAIL SEEMS TO ENCOURAGE STUDENTS TO WRITE MORE FREELY AND TO USE A WIDER RANGE OF LANGUAGE FUNCTIONS SUCH AS REQUESTS, COMPLAINTS, AND CONFIRMATIONS IN THEIR MESSAGES. "THE COMPUTER CAN RELIEVE TEACHERS OF MUCH OF THE DRUDGERY AND RELEASE THEM TO CONCENTRATE ON COMMUNICATIVE SKILLS." A THIRD GROUP HAS SET OUT TO DEVISE WAYS TO MAKE CALL EXERCISES MORE MEANINGFUL.

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15 WAYS TO GET THE MOST OUT OF

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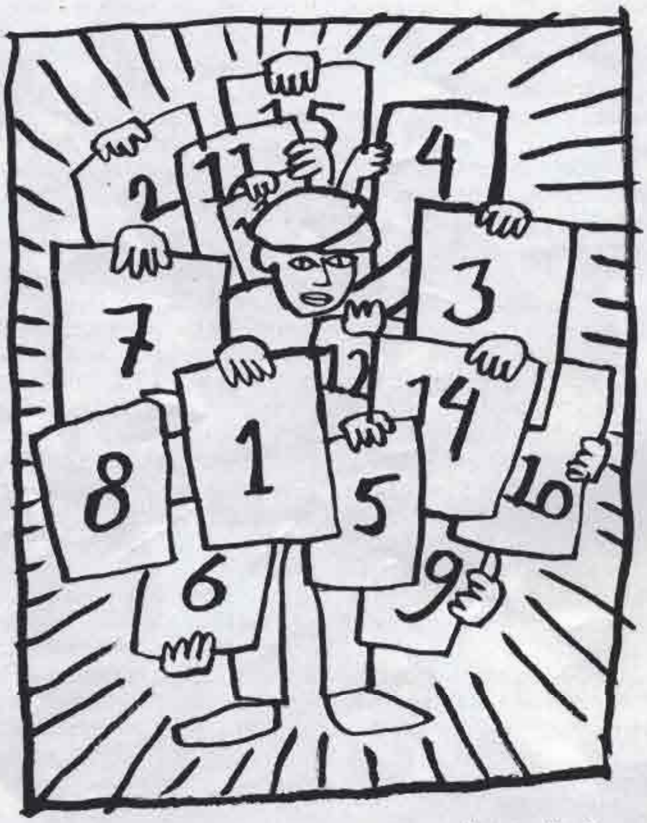

Illustration: Max Kisman

Xerox's Ventura Publisher remains the desktop publishing program of choice for the PC, perhaps the ideal program for handling large, heavily formatted publications like manuals. Which is not to say that it's a fun program to work with. On the contrary, the first release was buggy, its user interface is less than intuitive, and in general it can be a bear to work with on short jobs that are a breeze on Pagemaker. California-based wordcrunching expert Matthew Holtz tells us how to work with it more productively, the second in our continuing series on how to use popular wordcrunching tools more effectively.

By Matthew Holtz

1 When loading text/picture files into a Ventura chapter, you can load several files of the same type in succession. Use the Files menu's Load Text/Picture dialog box and click Several for # Of Files. As you load, Ventura will repeatedly display the Item Selector box, so you can easily load successive files. When you're done, click the Cancel button.

2 You can add several frames in Ventura in succession. Once you click the Add New Frame button in the Frame mode, hold down the Shift key as you add successive frames. The Add New Frame button will remain selected, allowing you to add frames repeatedly. Release the Shift key before you add the last frame. Remember, too, that in the Frame mode, pressing Ctrl-2 is the same as clicking Add New Frame.

3 You can format all chosen paragraphs on a page with the same tag simultaneously. To do that, select multiple paragraphs. You do so by holding down the Shift key as you click the paragraphs in succession. With the paragraphs selected, click the proper tag name in the Assignment list to assign that tag's attributes to the selected paragraphs. To deselect one paragraph, shift-click it again. To deselect all the paragraphs, simply click some other paragraph without the Shift key, or change operating modes. You can only use multiple paragraphs to assign tags. You can't use them to simultaneously change the attributes of paragraphs formatted with a variety of tags.

4 You can select multiple frames or graphics to cut, copy, reposition, or size them as a group. Shift-click the frames or graphics in succession to make a multiple selection. You can then cut or copy all the frames on one page to paste them on another, or reposition all the frames on the same page while keeping them equidistant to one another. Changing the size of one changes the size of all. And although you can't change attributes, such as frame background and ruling lines, to a selected group of frames, you can change attributes for graphics, such as line attributes and fill attributes. Once the multiple graphics are selected, just use the Graphic menu as you wish.

5 You can copy frames or graphics with similar characteristics, even if some characteristics differ. If you are creating frames or graphics that don't share all characteristics, it's usually helpful to copy rather than create each from scratch. For example, it's a good idea to copy frames with similar ruling lines and frame backgrounds, even if you intend to make them have different sizes. Likewise, it's beneficial to copy frames that are to have the same size, even if you intend to provide them with other attributes that differ. Use Shift with the Delete key to copy the frame to the clipboard and the Insert key to paste the frame in the same position on the same or a different page.

6 Hide pictures to speed screen processing. Use the Options command to do this. Display pictures only when you truly need to work with them. When you're about to begin working with one picture, you may find it helpful to temporarily move a neighboring picture off the screen before clicking Show Pictures. That way, Ventura won't have to redraw the additional picture unnecessarily. Hide pictures as soon as you're finished working with them. Hide before saving, loading, setting options, and scrolling rather than after, as Ventura will redraw your pictures after each of these procedures.

7 Greeking text causes Ventura to substitute plain, straight lines for text in Reduced and Facing Pages views. You can greek text of various sizes by using the Options menu's Set Preferences dialog box. The sizes available for Text To Greek represent the number of screen dots (pixels). If you choose a size, Ventura will greek all the text that size and smaller. Greek larger-size text to speed screen processing in these views. Greeking all text makes for speedy screen redrawing, rather than the sluggish performance these views sometimes afford.

8 To speed the location of Ventura-related materials, keep the names of directories containing Ventura materials low in alphabetical order. Doing so will minimize scrolling of Item Selector lists, and you'll be able to select Ventura directories more quickly. You may wish to reverse the trick that Ventura uses to give low priority in displaying the names of its generated tags (Z_BOXTEXT and so on) by beginning your Ventura-related directories with A_, as in A_SAMPLE.

9 Preassign tags and other attributes in wordprocessed files. Doing so means you don't have to tag those paragraphs in Ventura. Normally, Ventura assigns the Body Text tag to each paragraph. However, you can assign other tags with a wordprocessor by typing @ followed by the tag name, a space, =, and another space. Thus, to apply a tag called CHAPTER HEAD, you'd enter @CHAPTER HEAD = at the beginning of each paragraph you want to attach that tag to. Use your wordprocessor's macro capability to apply this tag repeatedly.

If you're unsure of how to apply some effect with your wordprocessor, create the effect with some sample text in Ventura, and save the file in your wordprocessor's format. Then check the file with your wordprocessor, and use the sample as a guide for further use of the effect.

10 Create a template for documents that are repeatedly laid out in a similar fashion. Once you finish with the first volume of a document, such as a monthly newsletter, use the Edit menu's Remove Text/File procedure to remove most of the files that appear on the Assignment list. Keep only those files that you plan to re-use in the next issue, such as the masthead. (Initially, you could instead treat such material as Frame Text, by placing the masthead, for instance, within a frame without assigning it to a file.)

Save the resulting empty template or shell under a name designating it as such. Next month, load the template, and save it under a name designating that month's issue. Then load it with that issue's files, and otherwise alter it as necessary.

11 Use the Page menu's Go To Page command (or Ctrl-G) to follow a selected frame's text file from page to page. In the resulting dialog box, the File button should be selected (darkened). Click the Next button and give the OK. Ventura displays the next frame that the selected frame's text file continues in, even when the next frame is on a far-flung page.

12 To reformat quickly, standardize the tag names in all your stylesheets. For instance, if you use Heading 1 for major headings in one style sheet, use the same tag name for major headings in all style sheets. With standardized tag names, you can quickly apply any style sheet to any document. New attributes will be automatically applied to all appropriately tagged paragraphs. Without similar tag names, Ventura will not apply the new tag's format automatically.

13 To change all similarly tagged paragraphs to a different tag, remove the tag they're assigned to. When switching style sheets as just described, if tag names do not agree, many people think they must retag the paragraphs one by one. Instead, simply remove the tag name carried over from the old style sheet. Use the Paragraph menu's Remove Tag command to do that. When you do, the dialog box will allow you to specify a tag name to convert to. Specify the appropriate tag name as it appears on the newly assigned style sheet. Ventura will convert the paragraphs and apply all formats automatically.

14 Assign and use the Function keys for tagging. When you use the Function keys, you don't have to switch to Paragraph mode as you usually would to apply tags. This ability allows you to apply tags as you edit in the Text mode. Here, too, it's a good idea to standardize. As much as possible, the same function key should be used for the same tag. F10 should always be assigned to Body Text, following Ventura's convention. F1, F2, and F3 should be used for Headings 1, 2, and 3, respectively. If you forget which tags are assigned to the keys, the quickest way to check is to type Ctrl-K to see the assignments, then press the Enter key to go back to work on the document.

15 Make liberal use of the other keyboard shortcuts as well. The accompanying figures list Ventura's keyboard shortcuts. Change to Enlarged, Normal, and Reduced view with Ctrl-E, Ctrl-N, and Ctrl-R respectively. Use Ctrl-G to go quickly to a particular page in the document. After using Ctrl-G, use the Backspace key to edit the page number to the page you desire, then press Enter to go to that page. Instead of clicking icons to change operating modes, use Ctrl-U, Ctrl-I, Ctrl-O and Ctrl-P to change to the Frame, Text, Paragraph, and Graphic modes respectively.

To remember these four keys, note that they appear on the keyboard in the same order as their icons appear at the top of the Side-bar. This is also the same order that the modes are listed in on the View menu. Use Ctrl-X to display the last dialog box you worked with. This shortcut is quite handy to use as you fine-tune attributes – when adjusting the ruling lines around a frame, for example.

(Portions adapted from *Mastering Ventura*, by Matthew Holtz, (c) 1988, SYBEX.)

Matthew Holtz *is a consultant in desktop publishing and teaches courses in wordprocessing, spreadsheets, and database management in Berkeley, California. As a free lance writer, he is the author of* Mastering Ventura, Mastering Microsoft WORD, *and the forthcoming* Ventura Instant Reference, *all from SYBEX (San Francisco, Paris, Dusseldorf, London).*

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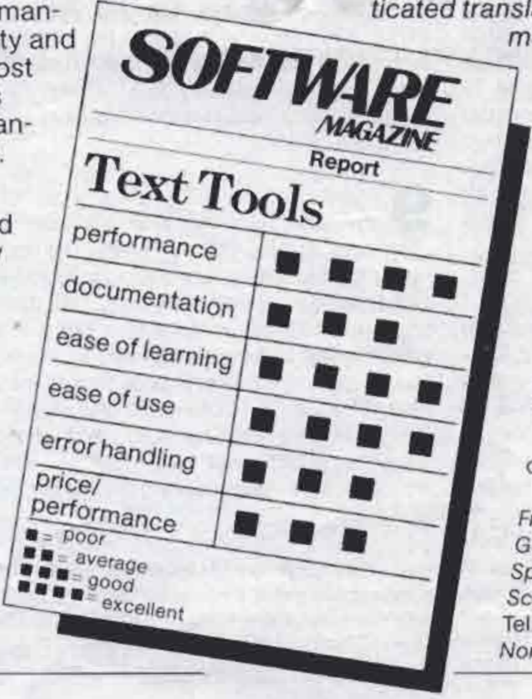

SOFTWARE MAGAZINE
Report

Text Tools

performance	■ ■ ■ ■
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MULTISCRIPT

WORDPROCESSING WITH NOTABENE, CHIWRITER AND MULTILINGUAL SCHOLAR

בראשית ברא אלהים את השמים ואת הארץ: והארץ היתה תהו ובהו וחשך על־פני תהום ורוח אלהים מרחפת על־פני המים:	᾽Εν ἀρχῇ εποίησεν ὁ θεὸς τὸν οὐρανὸν καὶ τὴν γῆν. ἡ δὲ γῆ ἦν ἀόρατος καὶ ἀκατασκεύαστος, καὶ σκότος ἐπάνω τῆς ἀβύσσου, καὶ πνεῦμα θεοῦ ἐπεφέρετο ἐπάνω τοῦ ὕδατος.	Вначале сотворил Бог небо и землю. Земля же была безвидна и пуста, и тьма над бездною; и Дух Божий носился над водою.
ויאמר אלהים יהי־אור ויהי־אור: וירא אלהים את־האור כי־טוב:	καὶ εἶπεν ὁ θεὸς Γενηθήτω φῶς, καὶ ἐγένετο φῶς. καὶ εἶδεν ὁ θεὸς τὸ φῶς ὅτι καλόν.	И сказал Бог: да будет свет. И стал свет. И увидел Бог свет, что он хорош.

An example of Notabene's multiscript capabilities. Text is the first verses of Genesis.

by Dr. Harry Gaylord

Unusually, my initiation into computerdom came via Old Church Slavonic. As a Biblical scholar editing medieval Eastern Orthodox manuscripts in both the Glagolitic and Cyrillic alphabets, I began using computers in order to wordprocess research papers for publication.

At first I used a simple but powerful editor on the university mainframe – sadly unwieldy, since all non-Roman text had to be input in a transcription intelligible to me alone. So when multiscript wordprocessors came out, I was all eyes and ears.

The three multiscript programs I've tried at length are the NotaBene Special Language Supplement from Dragonfly, Horstmann Corp.'s Chiwriter, and Multilingual Scholar from Gamma Productions. None of them seriously disappoint, in that they all do what they're basically supposed to, that is allow me to prepare work for publication and see my Cyrillic or Glagolitic script onscreen and printed out before it's typeset.

Of the three, however, NotaBene stands out – both in price and quality. Of course, it must be stated that a comparison of the three is rather unfair, in that NotaBene is both grander in design and far more expensive than the other two. In fact, for US$495, it gives you a comprehensive scholar's working environment, including not just wordprocessing but database management too.

NOTABENE

NotaBene's basic wordprocessing provision includes all English, French, and German characters. The Special Language Supplement, which comes in six separate versions, requires varying amounts of additional hardware: an EGA card (or VGA working in EGA mode), or a Hercules Graphics Plus card (or Everex-compatible Evergraphic Deluxe). Printers currently supported are the Epson FX-80, Toshiba, and Hewlett Packard laserjets.

The six versions are: Biblical Studies, which adds vocalized Hebrew and Classical Greek; Classical Languages, including Greek and transliterated Asian languages; European and Slavic, with all the modern Slavic languages in Cyrillic and Roman scripts, and a choice of Old English or Latvian, Lithuanian, and Romanian; Hebrew, which adds Yiddish and standard transcriptions for Middle Eastern languages; Transliterated Languages, including the transcription systems in the third and fourth packages; and the Full Version, with all of the above, which is the one I've been using.

In the Full Version, shifting languages and modes is easy. Control-L1 brings up a menu of all available fonts. There are nine windows to call up files or information onscreen, and three levels of footnotes. The extra fonts are downloaded to the printer, so that printing is fast – even on dot matrix printers.

I tried it with a Toshiba 321 SL. Slavic scripts print at normal speed, Greek slightly slower, and Hebrew slowest because it has to make several passes for each line. Of course, a laser prints at its normal speed every time.

NotaBene's file structure allows to easily be transposed for typesetting on machines such as the Monotype lasercomp. In addition, other software can be run on them in order to produce concordances and other useful research tools.

My reservations about this program are minor but deserve mention. First, the fonts are encrypted. Not a hindrance if all the characters you need are available. But if they aren't, there's no way of adding new ones. NotaBene's next revision will include open screen fonts. But what I need is the capability to generate new ones for printing too. Dragonfly says it's considering this possibility.

(continued next page)

FULLWRITE IMPOSING, VORACIOUS

The much vaunted FullWrite Professional, version 1.0 for the Mac, has finally arrived. FullWrite's notorious prehistory has been exhaustively discussed elsewhere. Suffice to say that Ashton Tate, a relative latecomer to the Macintosh software market, has now become a major player.

Once I'd cleared a few megabytes on my harddisk and started up FullWrite, the first thing that greeted me was an error message: "Not enough memory to complete this operation." What operation? I hadn't done a thing! Well, no choice but to reboot, this time bypassing several INITs taking up several kilobytes of valuable RAM. I started up again, this time without any problem.

Everything about FullWrite is imposing. Not just its voracious appetite for memory and disk space, but also the seemingly endless layers of features and options. This is a program designed to handle big projects: books with dozens of chapters, multiple authors, extensive bibliographies, and multiple cross-references.

But like any well-designed Macintosh application, the menus are logically laid out. The features you don't use so often, you'll look for under a menu. Those you do use often, you'll learn to access quickly through keyboard shortcuts.

In fact, keyboard shortcuts are so abundant that you can practically retire your mouse, which confirms the tendency exhibited by other Macintosh programs – notably WordPerfect – that not all Mac users want to do *everything* with the mouse. To put it another way: the mouse *is* supported.

FullWrite has some features *not* duplicated by other programs. The one that most appealed to my imagination was *Variables*. Variables is similar to the Glossary function in Microsoft Word, except that its entries can be dynamically updated.

For example, if you define a term in your glossary and

(continued next page)

MULTISCRIPT(CONT.)

Second, there are minor problems in printing. With the Toshiba and Hewlett Packard printers I've used, the position of one or two Hebrew vowels does not conform to normal practice. Dragonfly also promises to rectify this flaw.

CHIWRITER

ChiWriter was designed by Chi Horstmann, an American mathematician, to allow his colleagues and him to publish papers including complicated mathematical formulas and symbols. A very practical solution to a practical problem. And in a growing number of universities, Chiwriter has gained popularity among academics.

For basic wordprocessing, this is a very good product at a reasonable price – under $80 for the basic package. Two of my students produced Olivetti and Tulip screen, and nine-pin dot matrix printing, fonts for Russian within a week, and made a number of files for stylometric tests. They were able to export the files, run a program to make wordlists with frequencies, and import the wordlists and print them.

Horstmann continues to commission additional fonts, and enthusiastic users have designed many others, available at a nominal cost from Horstmann. In addition, Horstmann supplies a conversion program for transforming WordPerfect into ChiWriter files for the inclusion of extra fonts. The final printing is then done with ChiWriter.

MULTILINGUAL SCHOLAR

Gamma Productions' MultiLingual Scholar costs $350, and laser printer support an additional $150. You can use it with CGA, EGA, and Hercules graphics systems. Screen font quality is best with Hercules. MLS supplies five fonts of over 350 characters each. An elaborate facility for producing new fonts is also available, yielding a higher quality print than Chiwriter. In addition, two print qualities are possible.

MLS's floppies are not copy protected, but to use them you have to place a "black box" between the computer and printer. This is a serious nuisance, since every time you use it you have to re-install it – not good either for the computers' parallel ports or your patience.

Another disadvantage of MLS is its clever but complicated file structure, which, unless you're a computer expert, makes the import and export of files practically impossible. If you want to make concordances or conduct a stylistic analysis of your text, this is a major drawback – and the main reason why I would be reluctant to advise any beginners who might want these facilities to use this program.

Dr. Harry Gaylord teaches information technology to humanities students at the Rijksuniversiteit Groningen, The Netherlands.

Dragonfly Software Corp., 285 West Broadway, Ste. 500, New York, NY 10013-2204, U.S.A. Tel: +1 (212) 334 0445

Horstmann Software Design Corp., P.O. Box 5039, San Jose, CA 95150, U.S.A. Tel: +1 (408) 298 0828

Gamma Productions Inc., 710 Wilshire Blvd., Ste. 609, Santa Monica, CA 90401, U.S.A. Tel: +1 (213) 394 8622

INK'S TERM>TRACER

If you use a PC-based wordprocessor to do technical translation, you'll know there are two routes to building your own online bilingual glossary. You can either add the terms you need to one of the few online versions of original books, such as LinguaTech's Collins English-French Dictionary. Or you can invest in a CD-ROM drive, with the capacity to soak up every dictionary in the Tower of Babel municipal library but no useful application for managing all those words.

Ink International aims to fill this gap with *Term>Tracer*, which it bills as a productivity tool and glossary-handling program for IBM XT/ATs and clones. Run from inside a wordprocessing program, and compatible with most major packages, Term>Tracer enables busy translators to look up terms, paste the translations straight into their texts, add terms to their term database, create dictionaries from scratch, and quickly access any dictionary in any directory on the current drive.

The advantages are obvious. All those bulky dictionaries can now be pared down to what's useful, and, along with illegible company glossaries, can be input into any number of separate T>T dictionaries. There they can be consulted without the translator's attention being switched from the onscreen task. Generating separate dictionaries for separate jobs, whether by field, text type, or client, will also guarantee consistency of usage throughout a given document. In a nutshell, Term>Tracer makes looking up words and managing their usage a quicker, cleaner, business.

The package includes a clutch of English-to-French/Dutch/Spanish/German core dictionaries for the dataprocessing and general business fields, amounting to a total of some 700 terms – a bare minimum to get you started. You access these terms from the main menu, which you call up when you come across an unknown word in your source text.

Another facility – Exkey – allows you to handle non-standard characters for entering exotic brand names or math symbols in their source lists. It also offers a set of macros, which can hold only 45 characters – just about enough for a swanky bank name – and speed up repetitive phrases. But watch out they don't get confused with macros defined inside your wp program for the same key combinations.

The program is menu-driven and seems designed to use a minimum of keystrokes to move around the options. Handling T>T is, in fact, soothingly straightforward, with easily accessed Help screens and hotkey configurations to slip straight into the different options and cleanly designed menus. Everything in Term>Tracer seems made to help you get on with the task at hand, rather than sit and ogle the complexities of its style.

The accompanying documentation is also a model of conciseness and clarity, though, since the package must be initially designed for users working towards their non-English mother-tongues, foreign language versions would have been a good idea.

I particularly liked the accompanying Utilities pack, offering programs that do handy things to your dictionaries: merge two together; switch lookup directions (your English to French then becomes French to English); and convert the dictionaries you build into ASCII for a print out, or into T>T format to let you access them through the Lookup utility – thus allowing wide-ranging comparative word searches.

The combined effect of such tools should be to get translators away from their rigid paper-based dictionary habits and closer to the flexible uses of what might become a "hyperlex" version of what glossary management is all about. — **Andrew Joscelyne**

INK International, Prins Hendriklaan 52, 1075 BE Amsterdam, Netherlands. Tel: +31 (020) 64 63 61

FULLWRITE (CONT.)

insert it in various places, you can later update the glossary entry. And all occurrences of that entry will then be automatically updated in your document. On top of this, a variable can be a piece of text, or a graphic, or something called a "print" (a database field).

Disappointingly, on a Mac Plus with the standard one megabyte of memory, FullWrite *is* slow, reminiscent of MacWrite ("MacWait"). I opened a 12Kb Word document, lightly formatted, and FullWrite took nearly five minutes to convert and display it. Once displayed, though, it was a pleasure to see the headers and footers displayed in true WYSIWYG form.

I copied and pasted the document until I ran out of memory, at which point it was about 45 pages long. I was then urged by an alert box to start a new "chapter." Unfortunately, I didn't have the chance to test the program on a Macintosh with more memory. But people who have used FullWrite on a Mac II report that it does indeed shine on that machine.

Dazzled but also a little overwhelmed, I think I'll retreat back to WordPerfect for the time being – with occasional lapses into Microsoft Word. But some day, when I have two or three more megabytes of memory, and a several-hundred page book to do, with illustrations, indexes, a table of contents, a preface . . . who knows? Price: US$295.

— **Colin Brace**

Ashton-Tate Corp., 20101 Hamilton Ave., Torrance, CA 90502-1319, U.S.A. Tel: +1 (213) 329 8000

OPEN YOUR IZE TO INFORMATION MANAGEMENT

Cheryl Stearoyd is a harassed executive. "Rod," she addresses her woolly-headed office help Rod Klatschkopf sternly. "Do you remember making a note about the possible visit of Ryazoburo Kaku, president of the Canon Corporation, to the USA this fall?"

Rod glances furtively at the clock, nervously remembering his dinner date this evening, and replies: "Yes ma'am, I can get you all the information you want about his visit, ma'am, as soon as I get *organIZEd*."

Rod smiles a secret smile. He's been plodding through the manual for Persoft's Ize information management software all week, and he's already been bitten by the Ize bug. Not so much by the program itself, but by how many words he can think of that end in -IZE. Eventually, he finds the information, but it takes him so long that he'll be late for his date and will have to *apologIZE* to his platonic friend Vanda.

In fact, Rod *could have* found the information required in a fraction of the time it took him to use Ize to get it – if only he'd used a simpler search program. To begin with, Ize uses *keyword searches*, which means that un-predefined keywords cannot be searched for. In contrast, FileScan, for example, assumes that *every* word is a keyword.

Ize is an elephantine freeform information manager – strictly for heavy duty use. One of its most powerful features is its ability to produce an outline view, which lists every text in which your selected keyword appears. The outline always fits in the screen, and it provides links to a text or another outline, which allow you, if necessary, to continue your search.

Ize includes drivers for the most popular wordprocessors, so that they can be invoked and automatically load the correct file. It also has its own editor – in fact, a wordprocessor with limited capabilities, but adequate for producing straightforward notes or business correspondence.

However, the program only supports a limited number of printers, and does not fully support laser printer proportional-width fonts. Although texts can be printed in these fonts, Ize can only justify both margins of texts printed in fixed-width fonts.

Ize is only worth its US$445 price if you really need its comprehensive facilities. It takes a long time to learn, despite its excellent tutorial, and occupies more than 1.5 Mb of disk space and 512 K RAM – wellnigh the maximum available in the average XT/AT compatible.

P.S.: like FileScan and FilePoint, it's unusable with compressed files. — **M.R. Ratnagar**

Persoft, Inc., 465 Science Drive,
Madison, WI 53711, U.S.A. Tel:
+1 (608) 273 6000

MOUSE AS DOG

MouseMenus is a terminate-and-stay program enabling you to use a mouse with WordPerfect. While its intentions are admirable, its implementation leaves much to be desired.

To begin with, the mouse cursor and position cursor are one. Thus, any inadvertent movement of the mouse will send the cursor zooming around the screen, and with it, any text you happen to be entering. For some unfathomable reason, a left click generates a hard return, while a right click causes a large menu to be displayed in the right of the screen.

Experienced WordPerfect users will be dismayed to discover that the layout of the menu does not correspond to the old function key pattern. Not only is the layout different, but the names of some of the functions are too, thus rendering a sizable amount of the existing WordPerfect documentation obsolete.

Fast typists will discover that reaching for the mouse for simple commands is nothing but a hindrance, and they will want to continue using the function keys for most purposes.

In short, this program considerably reduces the usefulness of WordPerfect, and cannot be recommended. Price: US$49.

— **Colin Brace**

MouseMenus, Inc., P.O. Box 1020, Brookline, MA 02146, U.S.A.
Tel: +1 (617) 964 0067

MEGACHOMP RUSSIAN WP

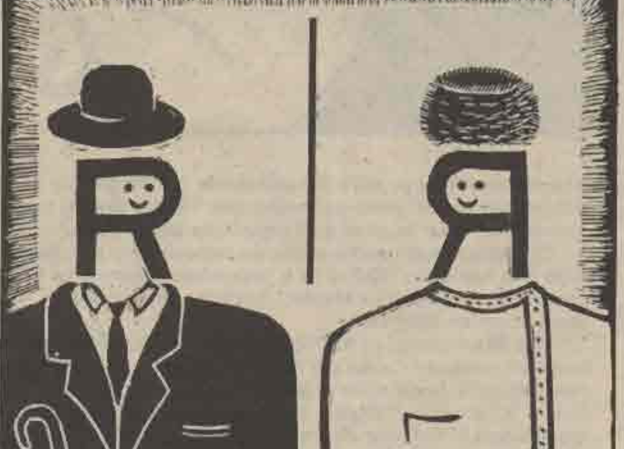

ILLUSTRATION BY RYU TAJIRI

Up to about two years ago, it was practically impossible to find a wordprocessor to handle non-Roman scripts. And anyone wanting to write documents *combining* different scripts – in my case Roman and Cyrillic – was driven to despair.

Then came the answer to our prayers: a whole clutch of both North American and European multiscript wordprocessors, mostly from small software houses, on the whole quite cheap, and some a tad rough and ready.

The one I got my hands on was DuangJan 1.3, from MegaChomp. This international bilingual wordprocessor is available in a score of language pairs, each of which combines English with one foreign script. Choices range from Russian, Greek, and Armenian to Hindi, Thai, and Lao. I tested English-Russian.

DuangJan lets you switch between English and Russian in the middle of your text just by pressing a single key. Most of the program's editing functions can be activated with no more than two keystrokes. More complex features, such as reformatting paragraphs and setting print options, are accessed through easy-to-use menus displayed at the bottom of the screen. And you can print a screen image fast – including enlarged characters, a surrounding frame, and a user-specified message above it. In fact, DuangJan's diversity of printing options is one of its most convincing features.

The program's only major fault is the poor quality of the Cyrillic characters. They seem to be designed by someone who has never actually seen a Russian text. Fortunately, however, DuangJan supplies a font editor, enabling users to design their own fonts. Which I did. And, using the program's keyboard layout editor, I also changed the slightly unusual positioning of the keys.

A minor drawback is that DuangJan lacks one or two facilities required to process scientific texts, such as indexation and automatic footnotes. But then, this wordprocessor is aimed at users who want an easy-to-handle, straightforward tool to produce combined English-Russian texts and print them in a visually attractive way.

And when it can do this reasonably well at US$109, who's grumbling?

— **Peter Wezel**

MegaChomp Corp., 3524
Cottman Ave., Philadelphia,
PA 19149-1606, U.S.A. Tel: +1
(215) 331 2748/8138

HERE'S LOOKING AT YOU, BITSTREAM

No more sneers and sniggers from PostScript printer evangelists. Bitstream's Fontware propels Laserjet Plus or Series II faithfuls into the typographical Eighties. The Fontware Library contains 30-odd typefaces that are easily installed as bitmaps (or as PostScript outline fonts, for that matter).

I chose to cast a beady eye at Charter, a serif typeface designed by Matthew Carter (Bitstream's senior design VP - see LT#8) for use on 300 dpi laser printers. I installed both display and printer versions in the sizes 6 through 12, and 14, 18, 24 and 36 in Xerox Ventura Publisher. Count on spending a long, pleasurable lunch while your computer is doing all the work.

The display fonts are a pleasure to behold - sizes 6 through 36 display very nicely on my Micro Display Systems' The Genius A4 monitor. The taste of a typeface, however, is in the printing. Don't try to print anything above 30 points as yet, because Ventura's Fatal Errors will start flashing across your screen.

What baffled me though is that at the same time the program froze Charter's smiling face emerged from the printer. Needless to say, Humphrey Bogart would have had far less trouble saying goodbye to Ingrid Bergman on that Casablanca airstrip if he had seen the face Bitstream says it with.

A basic Fontware kit is available free on request with the purchase of Word 4.0 and the new WordPerfect 5.0. Otherwise, prices are: Fontware Installation Kit including one typeface: $290. Each subsequent typeface: $195.
— Henri Broekmate

Bitstream Inc., Athenaeum House, 215 First Street, Cambridge, MA 02142, USA. Tel: +1 (617) 497 6333.

This review is typeset in 9 pt. Bitstream Charter Roman, with Ventura 1.1.

STRANGER IN YOUR OWN HOME

For old WP faithfuls, starting with WordPerfect 5.0 is like having your house done up: wiring fixed, plumbing renewed, woodwork painted – the lot. You know it's *your* house. Yet there's so much that's new, it feels like you're living with some upmarket neighbor. You feel rich.

WP5's basic functions are virtually the same as 4.2's. So you don't lose time on learning. And once you've mastered the ins and outs of the innovations, you wonder how you ever got on without them.

Every renovation has its rough spots, however – some things will eventually get on your nerves. Since graphics are now incorporated in documents, actual document processing – such as scrolling up and down and rewriting the screen after a major change in layout – has become remarkably slower.

Working with 4.2, you hardly noticed the system making a safety backup. With 5.0, however, on one occasion I waited so long for the system to respond to my anxiously tapping the cursor key, that I decided to reboot.

Another point: your files will grow enormously! All those graphics, tables, text boxes, and figures fill your harddisk like the grain on the chess board. And if your output printer is connected to somebody else's system, you may have to resort to shrinker programs to get your output file there. — **Tom Jacobs**

WordPerfect Corp., 1555 North Technology Way, Orem, UT 84057, U.S.A. Tel: +1 (801) 225 5000

COMPUTER-AIDED-HEADLINES?

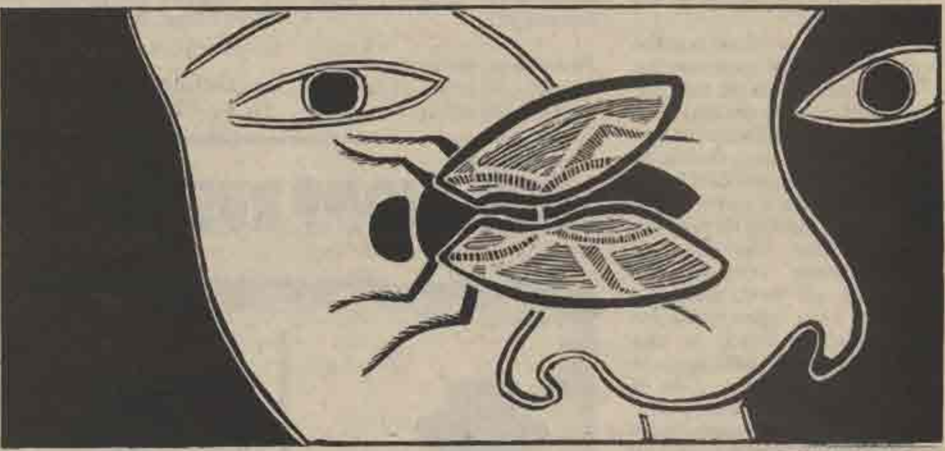

ILLUSTRATION BY RYU TAJIRI

The Salinon Corp. says Headliner is for "creating headlines, theme lines, slogans and jingles with your personal computer." What makes a good headline? It should be "easy to remember, easy to read and simple to pronounce."

Creating them can be arduous, especially if you have big qualms about plagiarism. But, says the manual: "There is a procedure proven to be highly effective. Simply find and modify some clever or already popular expressions." Even Shakespeare used to "borrow" good lines, so they say.

Headline contains 33,000 expressions divided into several generic databases. There's one for common idioms (*"If looks could kill . . ."*), one for proverbs (*"Don't remove a fly from your friend's head with a hatchet"* – sic), song titles (*"Bill Bailey won't you please come home?"*), movies (*"Eight Million Ways To Die"*), books (*"Sex and Human Loving"*), quotations (*"Nothing depreciates a car faster than a neighbor buying a new one."*), and previously used promotional expressions for various types of product (*"The beautiful way to express your love"*) etc.

To generate your own expression, you start at Headliner's two screens: one for database selection (All, Songs, TV Shows, Advertise, Toys, Beverage, etc.), and one for search mode selection.

There are seven search modes: Review (displays all expressions), Whole Word (finds an exact match for a word), Embedded (searches for a string of characters), Similarity (looks for expressions that are somewhat similar to a line), Rhyming (searches expressions that end in a particular word or sound), Acronym (finds words that have matching beginning letters), and Profanity (checks an expression for possible "off-color, vulgar or obscene meanings").

For LT, I created a motley collection of headlines: "The Latest Twist, Lickety Thick, Language Technology!" "Join us in a voyage to the bottom of the language industry," "Read all about the words and the bees," "It takes two letters to tango" . . .

And that's not all! What about "If you enter words, we should've entered your mind," "Follow that word," "We take the words right out of your mouth," "Till the end of words," "'Cause in the race against words the chase is on," "We've got the write-how!" "Get your words' worth!" "We make words for people who make words," and "The lust for words."

I read these to friends and colleagues, and I'm afraid their reactions wouldn't make it through the profanity checker. — Peter Rutten

Salinon Corp., Box 31047, Dallas, TX 75231, U.S.A. Tel: +1 (214) 692 9091

DISKTOP PUBLISHING

If you thought hypertext was just for the Mac, Ntergaid's Black Magic, for MS-DOS, is here to put you straight. It also puts hypertext back where it belongs – working with words – though that's as far as it goes.

Black Magic furnishes bare text with such hyper-enhancements as note, replacement, and reference links. These allow you to expand on ideas and make cross references to other information without cluttering the main body of your text with too much detail.

And the program has a number of features that other hypertext programs lack. For instance, lest you lose your way meandering from file to file, there's a function called "mapping," which provides you with a screen map of the links between your files. You can also leave "markers" in your texts to allow you to return to selected spots.

Unfortunately, Black Magic isn't so great at presentation. You can import graphics with its TSR program Grabit, but it has no advanced drawing aids. In addition, the screen is unbalanced and the letterfonts limited and poor in quality.

Given hypertext's uniqueness as the first software application whose ultimate output medium is not paper but the screen – disktop publishing, as Ntergaid calls it – these are serious and baffling shortcomings. But they mark the bounds of Black Magic's usefulness. A hyper-word-processor: nothing more and nothing less. Price: US$150.

— Louis Stiller

Ntergaid Corp., 955 Connecticut Ave., Bridgeport, CT 06607, U.S.A. Tel: +1 (203) 368 0632

SEARCH ME

The computer industry doesn't brag about the pitfalls of working with a microcomputer. But they're there.

For instance, the longer you use one, the more diskettes and files you accumulate. Your desk soon turns into Floppy Mountain. If you have a harddisk, your clutter may be less visible, but as a regular user, you'll soon lose mental grip over what you've got.

A computer is supposed to remember things for you, and information is packaged into files to which you give names when you create them. Sooner or later, though, with the restriction of an eight-letter name and three-letter extension, you'll start losing track. Your letters to Smith and Co. might be labelled SMITH1.LTR, SMITH2.LTR to SMITH10.LTR. But which was the one about the shipment of chewing gum?

This is the sort of question that programs like *FileScan* and *FilePoint* are supposed to answer. All you need do is type in the relevant key words –"chewing gum" – and the program will direct you to the file or files containing them.

Panther's *FileScan* has its own userfriendly online manual, and its syntax is easy to use thanks to its very practical Demo program. It requires only 90 Kb of RAM and can be fully operational using just one self-contained 65 Kb ".COM" file which has its own Help Screens.

Your search can either be "global" – of every single file on your harddisk. Or it can be "conditional" – that is, only of the subdirectory containing your letters to Smith. A conditional search is of course much speedier.

Insoft's *Filepoint* achieves similar results – in a somewhat cumbersome way. It first creates a Library, which you configure by including all the subdirectories you want to search. The program then interrogates the Library to see if it contains the information you want, rather than examining each file in turn. Unfortunately, if the information required is contained in recently created files, the Library must first be updated.

Filepoint's 66-page manual is comprehensive but irritatingly compiled. You have to plow through several pages of detailed information before encountering even the most basic instructions on how to start up.

One point to Filepoint's credit: it displays and highlights the relevant word or phrase you're looking for, showing you exactly where it occurs in the file.

Finally, a word of warning. If you use any kind of file compression utility such as ARCing on your harddisk, both of these are unusable.

— M.R. Ratnagar

Panther Associates, Rte. 1, 1014 Cimarron Circle, Roanoke, TX 76262, USA. Tel: +1 (817) 379 5266

Insoft Development Co., 35 King St., Bristol, Avon BS1 4DZ, U.K. Tel: +44 (0272) 268 893

PHONETIC FONTS FOR THE MAC

Mac the Linguist 2 is a comprehensive set of phonetic fonts for the Macintosh. It's based on two of the original bitmapped fonts for the Mac: New York (a serif typeface) and Geneva (a sans-serif typeface).

If you work with foreign languages or phonetic alphabets, and you'd like a set of fonts capable of creating an extended range of diacritic accents - either for use as a screen font or with the ImageWriter — this collection may be useful to you. The documentation is good, and the fonts come in a full range of sizes from 9 to 24.

If you have an Apple LaserWriter, though, bear in mind that PostScript's smoothing algorithm for bit-mapped fonts does not always produce satisfactory results. With Apple's new QuickDraw laser printer, the SC, this shouldn't be a problem, and may well extend the usefulness of these fonts. Price: US$40. — Colin Brace

Megatherium Enterprises Corp., P.O. Box 7000 - 417, Redondo Beach, CA 90277, U.S.A. Tel: +1 (213) 545 5913

HOT SHOT

Hot Shot is a versatile graphics editor for the PC that reads a variety of text and graphic formats. A mouse is recommended but not required. It was reasonably zippy on the machine I tried it on – an XT with a monochrome display.

In the graphics (bitmap) mode, it offers six levels of zoom, pixel editing, and various drawing tools. In the text mode, I read in a screen dump from Lotus 1-2-3 provided with the program, and could add labels, highlights, and move blocks of the spreadsheet around the screen with the mouse.

Despite the program's reliance on menus, it's not very intuitive, and the manual is rather obtuse. However, if you *write* computer manuals yourself, it might be useful. With it come two memory resident programs, *Grab* and *GrabWind*, for making screen dumps within other programs (the latter specifically for within Windows).

One caveat: check first whether Hot Shot supports the hardware you're using. It won't run under every configuration on the market. Price: US$99.95. **— Colin Brace**

Symsoft Corp., 444 First Street, Los Altos, CA 94022, U.S.A. Tel: +1 (415) 941 1552

TeX MADE EASY

PUBLISHING COMPANION

Publishing Companion translates WordPerfect documents into the TeX typesetting language. And for non-typological wordworkers wishing to publish at above-DTP quality, it offers two major advantages over working with TeX direct.

First, WordPerfect is easier and more wysiwyg than TeX, with its cluttered command-filled screen. Second, TeX lacks many of WordPerfect's auxiliary features such as spellchecking, the easy entry of foreign characters and accents, index-building facilities, and compatibility with database programs – useful for mail merges.

Using Publishing Companion is easy. Once you've written your textfile in WordPerfect, you convert it with a one-line command into a Publishing Companion standard layout file. Or you can make your own layout files by selecting features from the program's fast and easy menu.

Publishing Companion combines all the advantages of wordprocessing with TeX's publication quality typesetting – without a human hand coming between them. And another plus: since it's uncomplicated to install and control, the user's manual is mercifully short.

— Manfred Weber

K-Talk Communications, 3920 Olentangy River Rd., Columbus, OH 43214, U.S.A.

JAPAN: TAKING OVER OR JUST CATCHING UP?

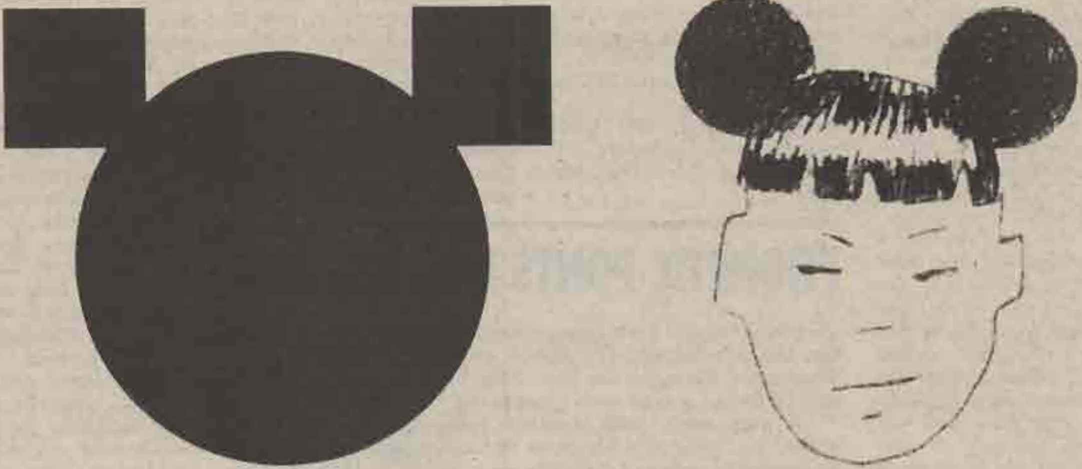

ILLUSTRATION BY JAN DIETVORST

"The Fifth Generation Fallacy," J. Marshall Unger (Oxford University Press, 1987). Price: UK£22.50 (US$37.25)

by Alex Gross

Subtitled *"Why Japan Is Betting Its Future On Artificial Intelligence,"* this book advances two major arguments about the gap between language and reality. Ungar first argues that western understanding of the goals of Japan's drive for a "Fifth Generation" of computers is wrong because it is based on our poor knowledge of Japanese. He sees the chief villains here as Edward Feigenbaum and Pamela McCorduck, authors of the 1983 book "The Fifth Generation" and ardent advocates of artificial intelligence in its most extreme and allegedly error-prone form. Through efforts such as theirs, Ungar believes, the West has been persuaded that the Japanese seek new and advanced computers in order to surpass western technology once and for all.

Unger's thesis is that the Japanese drive for supercomputers is in fact motivated by very different goals. Their main concern, he contends, is to find a way of manipulating what he sees as their unwieldy native language. And herein lies Unger's second great gap between language and reality: the inability of the Japanese themselves to recognize the inefficiency of their language, a blindness which has prompted a vain – in both senses of the word – attempt to find a way of perpetuating their writing system. To achieve this, they have allowed themselves to be sold a bill of goods based on the unrealizable goals of a utopian pseudo-scientific effort. And it is this blindness that explains the many postponements the Fifth Generation ICOT project has suffered since its inception.

This is heady stuff, and it is no dishonor to be partially or even largely mistaken in an area so new and fraught with sophisticated cross-cuttings of disciplines. Indeed, Unger's book encompasses far more than merely the problems of Japanese typesetting. His detailed understanding of AI's highly specialized concepts and processes is truly impressive. And he presents a wealth of detail about Japanese *kana* keyboards and character conversion that will surely serve as a resource for others. His reiteration of philosopher John Searle's distinction between "weak AI" (that computers can be useful in modelling and testing how the brain works and applying this knowledge in limited expert system instances) and "strong AI" (roughly, that computer programs and the human brain are ultimately analogous and even interchangeable) is a useful one. Most LT readers would probably feel he is correct in siding with the former.

Of course, there are those who argue that computer science will find a way of totally bypassing language. If they are correct, then all aspects of machine translation may suddenly become ridiculously easy. Translators and interpreters will go the way of village scribes, water bearers, and footmen. The new gods of language and meaning will be computer scientists. On the other hand, if they are mistaken, we can expect these newcomers to creep off into a corner and commit electronic seppuku. More probably, the battle between "strong" and "weak AI" advocates will simmer down into an uneasy draw. A tendency in this direction can already be seen in the translation market, with computers performing massive and tedious tasks, while "human translators" are still indispensable whenever finesse or overview are called for.

I do not agree with Unger that the Japanese might be better off managing their language with a Roman alphabet. He quotes Kazuhiro Fuchi, Japan's foremost AI expert, to support this view. But Fuchi's words could also be interpreted as supporting the opposite viewpoint. On page 182, Fuchi is quoted as saying:

"When you do things like AI or machine translation, it's inevitable that you have to deal with natural language. The origins of ideas differ depending on which language you take as the base, and if we Japanese are going to do these things, freedom of thought will be impossible unless, of course, the base is Japanese.

"The Japanese language is our own, so you could say it has become a unique reflection of our experiences . . . Though English commands prestige, I can see its limitations. As long as Japanese think in a kind of transplanted language system, they can't use their imaginations. If we make Japanese the base, however, I think there's a possibility of our producing a stream of new ideas, because Japanese provides us with maximum freedom . . . Now I don't necessarily think of these new ideas as Japanese . . . I'm a little unhappy when people talk about 'Japanese-style AI' in the narrow sense.

"I myself am aiming for a universal base, but I think that the attitude of 'well, since it's universal, you might as well do it in English' is extremely weak, at least as a research strategy for Japanese . . . "

Whatever stereotypes of the Japanese, war memories, or related factors this quotation may evoke, it is the subjective experience of many western students who have learned to read oriental characters fluently that a different sensation is involved in reading a character-based language from an alphabet-based one. Modern Chinese, Japanese and Korean all use the one surviving non-alphabetic writing system in the world. Even if it could be demonstrated decisively – and I do not believe it can – that alphabets are superior to ideograms in all aspects, it would still be an enormous mistake for this alternative writing system to be rendered extinct just for the sake of conformity. However, this is a minor quibble about a largely excellent book dealing with complex and timely themes in a thoughtful and responsible manner.

HOWDY! I TRAVEL IN RUBBERWARE

"Meaning: The Frontier Of Informatics," Informatics 9, edited by Kevin P.Jones (ASLIB 1987) Price: UK£24 (US$40.80)

by Andrew Joscelyne

The late Margaret Masterman, founder of the Cambridge Language Research Group, is a name most people involved in the language industries probably won't have heard of. Nevertheless, the proceedings of the Ninth ASLIB Conference On Information Retrieval are dedicated to her memory, with an introduction and two papers evoking her apparently formidable personality and prescient ideas about matters language-technological, such as interlinguas and thesauri, and more intriguingly about how written language reflects "breathgroups."

The other contributions have a go at cracking the $64k question of how knowledge bases or their accompanying retrieval systems can become intelligent – handling not just form but meaning. The range of specific topic and style is fairly wide: from Tom McArthur, editor of English Today, giving us an engaging clay-tablet-to-silicon-chip panorama of the modes of representing, stocking, and circulating knowledge, to a fairly technical report on an architecture for advanced information retrieval.

En route, we're also treated to one of John Hutchins' detailed overviews, this time on the question of summarization for information retrieval, as well as a long, complex, paper on the – illusory? – trail of Semantic Normal Form, advocating a theory of meaning for data modelling in which "agents" take responsibility for their declared semantic parameters. Tom Addis gives us a highly systematic lesson in what "the boundaries of knowledge" are for machines, teaching us all about induction, deduction, and abduction, and how the latter two are only found in people.

Editor Kevin Jones, billed exotically as from the Malaysian Rubber Producers' Research Association, offers a well written argument for responsive thesauri, which I found full of interesting

HARDCOPY ROUNDUP

"Electronic Publishing," Joost Kist (Routledge, London and New York, 1987). 223 pages. Price: UK£27.50 (US$36.75)

Joost Kist quotes John Naisbitt's dictum: "The most reliable way to anticipate the future is to understand the present." Reading Kist's exposé of computer systems alone sufficed to persuade me that he would do better devote his time to studying the present.

What Kist attempts to disseminate in this book might – to use the author's own terminology – sometimes be termed "data," sometimes "information," but seldom "knowledge." In short, to paraphrase another one of Kist's self-destructive quotes: there are so many holes in this book, you could run it on a Hollerith machine.

"Dictionnaire des Télécommunications (English to French) " by J. de Luca (Masson, Paris, France)

A major, and very welcome, new work. Telecommunications is a field that has lacked good up-to-date dictionaries. The author has drawn on trade press, manufacturer's publications and manuals to compile 32,000 entries, plus 2,200 abbreviations and acronyms.

In addition to equivalences describing technical equipment, the work includes terms used in telex or text communication traffic, such as MOM (*"Attendez"*), MOM PPR (*"Attendez, changeons le papier"*), or RPT ALL (Répétez la communication au complet") The most recent developments, such as cellular telephones and value-added networks, are covered.

"Oxford Paperback Dictionary (Third Edition)," edited by Joyce Hawkins (Oxford University Press, Oxford, U.K.). Price: UK£3.95 (US$6.72)

What's different about this one is that it has lots of proper names, including celebrities and institutions, among its 56,000 entries. Mujahidin, Sandinista, and Glasnost are all in there.

"The Science of Linguistics and the Art of Translation," by Joseph L. Malone (SUNY Press, Binghampton, New York). Price: US$24.50 (paper), US $59.50 (cloth)

This book examines what happens linguistically when you translate. Though not light reading, it doesn't require a background in linguistics to be understood. Malone proceeds step by step, explaining terms such as "nonce conflation" and "cenematic-plerematic complexes" as he goes along. Malone draws examples from a bewildering variety of languages, and also ranges widely over text types, from poetry to comic strip dialogue.

"Inner Track Learning," by Michael Lawlor (Pilgrim Publications, Gloucester, U.K.) Price (book and cassette): £12.75

For several years now, various techniques – such as suggestopedia and accelerated learning – have been in use to exploit the righthand side of the brain in foreign language learning. Lawlor shows learners how to go about learning in this way. For the uninitiated, the righthand side of the brain is where your emotions and creativity are located, and the theory is that in most humans its potential is grossly underused.

"Introspection in Second Language Research," edited by C. Faerch and G. Kasper (Multilingual Matters, Clevedon, Avon, UK). Price: UK£23.50 (US$49) cloth; UK£9.95 (US$21) paper

Looks at the thought processes behind the way students learn a second language, and behind translation approaches.

NEW JOURNAL!!

International Journal of Lexicography (volume 1, number 1), edited by Robert Ilson (Oxford University Press, Oxford, U.K.). Annual Subscription: UK£36 (US$62)

This new quarterly academic journal, backed by the European Association for Lexicography and the Dictionary Society of North America, carries articles on lexicographical issues and book reviews. The four articles in this first issue are on British and American grammatical differences, the contrastive analysis of terminological systems and bilingual technical dictionaries (with illustrations from English and Hungarian), the treatment of the Biblical Hebrew word Hu in monolingual dictionaries, and the problems of limited vocabulary listings.

observations – notably that the Rev. Cruden, the original concordance freak, went mad trying to produce a – paper – information retrieval system for the Bible.

Talking about madness brings me to the longest contribution to this collection: a 40-page epic on man, mind, meaning, cognitivism, and AI by Mike Malloch, printed in a font that reminded me of 19th century theology tomes with the frustrating habit of stopping one train of profound thought in the middle of one page only to begin a new one on the next. Just when you thought he'd finished. In this poorly proofread hitchhiker's guide to AI and other galaxies, we learn that connectionism offers a better hope than most other isms at providing an account of meaning. Now who's he kidding?

I'd have liked to know what participants thought about each other's contributions. I'd also like to know what most people think "informatics" means – a sort of ASLIB buzzterm to most of us, but with curious echoes of "l'informatique," the current French word for dataprocessing in general.

Finally, a word about printing: speedily put together editions such as this retain the hardcopy of the original papers, so we get the usual anthology of printer styles. Interestingly, most of the nine chapters were output from an Amstrad PCW. They don't look half bad, when you consider.

TEACH YOURSELF MACHINE TRANSLATION

"Machine Translation: Linguistic Characteristics of MT Systems and General Methodology of Evaluation," Laurent Bourbeau and John Lehrberger (John Benjamins, Amsterdam and Philadelphia, 1988). 240 pages. Price: DFL 75 (US$ 32)

This book is based on reports prepared for the Canadian Secretary of State's Department from 1982 to 1984, at a time when that department was turning away from sponsoring MT development and toward evaluating commercial – and what are now referred to as "second generation" – MT systems.

It's designed around three chapters, dealing with three key aspects of MT: types of MT systems; their linguistic components; and their linguistic evaluation by the user.

The first two chapters would make a good teach-yourself intro to the field, illustrated as they are with plentiful, well chosen, English-French examples.

In chapter one, the authors deal with criteria to classify MT systems: degree of automation (batch, interactive, computer aids), depth of analysis (local vs full sentence), type of transfer (direct, indirect, interlingua), modularization, and domain dependency.

They make a strong case against local analysis – i.e. straight word substitution and local rearrangements – arguing that only full analysis of the sentence can yield consistently good results. This discussion gives ample opportunity for explaining the problems of MT and what solutions are available.

The second chapter describes the various linguistic components of MT systems. On the lexical level: a description of the content and structure of MT dictionaries, and a warning against "canned" idiom entries. And on pre- and postprocessing: how to handle various typographic features and break up text into significant processing units (words and sentences).

The section on morphology provides a clear overview of inflectional, derivational, and compositional morphology. The one on syntax deals with problems of homography, scope of conjunctions, and prepositional attachment, with special emphasis on complex noun phrases, illustrated by some stunning examples taken from the TAUM-Aviation corpus.

The semantics section discusses how semantic features are created, interrelated, and used for solving syntactic problems such as selecting alternative translations.

Throughout these two chapters, the authors also raise a number of design issues: modularization and sequencing of the analysis, transfer, and synthesis components; how to establish the boundaries between linguistic levels (for instance, should compound words be handled by morphology or syntax?); what to do when a complete sentence parse is not achieved (a typical TAUM issue); and how to extend a domain-based system to other domains (again a typical TAUM issue, since both TAUM's Météo and Aviation systems were designed for a particular sublanguage).

The authors also point out several limitations of second generation systems, such as sentence-limited context analysis and the absence of actual semantic representation of sentences. They fail to go on to discuss third generation technology – which, granted, is of secondary importance, since the book is about evaluating existing systems, none of which have yet broken through the third generation barrier.

The most salient feature of the book's last chapter – on system evaluation – is a discussion on how the user can feed sentences to a "black box" (a commercial MT system whose developer denies access to the grammars), analyze the output, and use it to get a fair idea of how the box's insides operate. If the user wants to know the system's real potential for growth – as opposed to what the vendor claims – this sort of insight is essential.

The book enumerates an impressive array of evaluation criteria, including an appendix reviewing various evaluation methods already in use, though it doesn't explain how these methods might be combined effectively. The authors rightly stress that evaluation is always specific to a particular situation – system + user + corpus of texts – and that a "cookbook approach" would be far too simplistic.

While I agree substantially that the right answer in MT is usually "It all depends," I still feel that there are dynamic interrelations between the various criteria that could be brought to light. In any case, whoever wants to pick up on system evaluation from there, can at least use this book as a comprehensive and authoritative starting point.

All in all, Bourbeau and Lehrberger have done a good didactic job in describing the intricacies of machine translation and demonstrating how multifaceted and complex its evaluation is. And any potential user will learn a lot – in terms of both wisdom and wariness – from it.

— **Claude Bédard**

SENSOR AGE

"Eco-Computer: The Impact Of Global Intelligence," Geoff Simons (John Wiley and Sons, London, 1987) Price: UK£21.95 (US$37.30)

by Tony Whitecomb

You already knew we were living in the Information Age, the Computer Age, and the Communications Age. But did you know this was also the Sensor Age? As Simons puts it: "... It will become increasingly unnecessary for human beings to spoonfeed computers with their daily bread." Eco-Computer's raw material is the networks of multinationals, governments and international organizations.

Language technologists may envisage robots reaching for their bookshelves to update their world knowledge. But that's not what Simons means. The daily bread of his Sensor Age is eco-stuff, or physical data, and eco-thought, man's impact on the biosphere. CO2, the pollution of the Rhine, DDT, the extinction of the buffalo, Calcutta's open sewers, and nuclear waste make up the body of this book. Simons presents the world as one big "smart building," with a monstrous burglar alarm called SDI.

To wordworkers, Eco-Computer is a timely reminder that there's more on computer networks than hypertext and electronic publishing. It is certainly a book of wide scope and philosophical depth, touching on the social and political impacts of global computer networks. The argumentation is tied to reality by concrete illustrations and references. The writing style is clear and straightforward, sometimes eloquent ("... there is an evolutionary premium on people thinking less and machines thinking more.") Preambles and summaries around each chapter provide a smooth transition to the next one.

The book seems suitable for the larger public, serving as a good overview of worldwide information technology and as a thought-provoker. Specialists will find some inaccuracies and overoptimistic simplifications ("... computers can recognize faces, answer spoken and written questions ... diagnose diseases"), but they will also profit from the broad treatment and perspective into which Simons puts current developments.

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SEPTEMBER, 1988

21-22, GENEVA, SWITZERLAND
International Conference on Teaching of Terminology. Info: M. Bruno de Bessé, Ecole de Traduction et d'Interprétation, Université de Genève, 19 place des Augustins, 1205 Geneva, Switzerland.

21-26, GAETA, ITALY
International Symposium of Italian, US and Russian publishers and translators. Info: Professor Quirino Leccese, Comune di Gaeta 04024, Latina, Italy.

22-24, SAVONLINNA, FINLAND
Seminar on empirical research in intercultural studies and translation. The first of a series of international seminars and conferences under the heading of Translation in Finland (TRANSIF). Organized by the School of Translation Studies in Savonlinna. The preliminary list of invited speakers includes Gely Chernov, Nils Erik Enkvist, Hans P. Krings, Albrecht Neubert, Jenny Thomas and Gideon Toury. Info: Associate Professor S. Tirkkonen-Condit, TRANSIF Seminar, University of Joensuu, Savonlinna School of Translation Studies, PL 48, SF-57101 Savonlinna, Finland.

23-25, CANTERBURY, U.K.
ITI International Translators' Weekend Workshop, Rutherford College, University of Kent, Canterbury. As in previous years, there will be groups working on texts in French, German, Italian, Spanish, Swedish and Dutch, and other languages if there's enough demand. The program includes ITI network meetings, terminology work, and translation of advertising material. Cost: UK£85 to ITI/TTG/TA/IIT member organization members, UK£95 to non-members and UK£70 to students. Includes accommodation and all meals. Early application is advised since numbers will be limited. Info: ITI, 318a Finchley Road, London NW3 5HT. Tel: +44 (1) 794 9931.

OCTOBER, 1988

7-9, BARCELONA, SPAIN
Third Mundilingua exhibition, Palacio Ferial, Barcelona Fair Complex. Conferences and round table discussions will also be held alongside the Exhibition. Info: Keith Harper S.A., Mundilingua, Avenida Diagonal 523, 08029 Barcelona, Spain.

11-12, SEATTLE, WASHINGTON, U.S.A.
Business and Translation Symposium sponsored by the University of Calgary and the Alberta Association of Translators and Interpreters. Three sessions: (1) Relationship between the Businessperson and the Translator/Interpreter, Expanding Trade with Third World Countries, and Ethics; (2) Terminology Banks and Word Processing for the Translator; (3) Development of Self-Directed Continuing Education Programs. Info: A.A. Greaves, Department of French, Italian and Spanish, 2500 University Drive NW, Calgary, Alberta T2N 1N4, Canada.

12-16, SEATTLE, WASHINGTON, U.S.A.
29th Annual Conference of the American Translators' Association, Stouffer Madison Hotel. Theme: Languages at the Crossroads. Info: ATA, 109 Croton Avenue, Ossining, NY 10562, U.S.A. Tel: +1 (914) 941 1500.

14-16, HELSINKI, FINLAND
NORD, Open Conference For Literary Translators from the Nordic Countries. Official opening by Finnish Minister of Education. Simultaneous interpreting (Finnish and Swedish) for some sessions. Lawyers and publishers will also take part in panel discussions on Saturday and Sunday respectively. Info: Suomen Kääntäjien ja tulkkien liiton toimistoon (Finnish translators' and interpreters' association), Siltasaarenkatu 15 C 66, 00530 Helsinki, Finland.

19-22, SITGES, SPAIN
Linguapax II. 13th Seminar on Languages and Education organized by the Institut de Ciències de l'Educació, University of Barcelona. Info: Angels Garcia, ICE, Universidad de Barcelona, Pl. de la Universidad, 08007 Barcelona, Spain. Tel: +34 (93) 318 42 66, ext. 2275.

28-29, LAUSANNE, SWITZERLAND
Second Colloque de Dorigny on Literary Translation, including the presentation of the Prix Lémanique de Traduction, awarded every three years for outstanding translations from German to French and French to German. The 1988 award, amounting to 12,000 Swiss francs, will be awarded to Philippe Jaccottet and Elmar Tophoven. Info: Fondation du Prix Lémanique de Traduction, c/o Section d'Allemand, Université de Lausanne, BFSH 2, 1015 Lausanne, Switzerland.

29-30, GOTHENBURG, SWEDEN
Modern Language Association of Sweden, golden jubilee conference and language days. Info: D. Walin, Hovasklintväg 2, 43080 Hovas, Sweden.

NOVEMBER, 1988

2-4, SAN SEBASTIAN, SPAIN
Conference on the Use of Lesser Used Languages in Public Administration. Info: J. Alvarez, Amezketa 12BF, 20001 Donostia (San Sebastian), Spain.

3-4, BRUSSELS, BELGIUM
Le Traitement Automatique des Langues, colloquium on language and computers, Sheraton Hotel, Brussels. Info: EC2, 269-287 rue de la Garenne, 92000 Nanterre, France.

10-11, LONDON, U.K.
10th International ASLIB Conference on Translating and the Computer, CBI Conference Centre. Theme: The Translation Environment — Ten Years On. Info: Barbara Hobbs, ASLIB, Information House, 26-27 Boswell St., London WC1N 3JZ, U.K. Tel: +44 (1) 430 2671.

11-14, ARLES, FRANCE
Fifth ATLAS (Assises de la Traduction Littéraire à Arles) Conference. The planned program includes sessions on retranslating Freud, on the problems experienced by translators of humanities titles, on translating poetry, and on less common languages, including Chinese and Bengali (!). The last day will be devoted to Portuguese literature. Working language will be French, but questions accepted in English during all sessions. Info: ATLAS, 99 rue de Vaugirard, 75006 Paris or CITL, 18 rue de la Calade, 13200 Arles, France. Tel: +33 90 49 72 57.

16-18, REUTLINGEN, F.R.G.
International Association for Language and Business, Annual Conference. Info: John D. Graham, Am Flutgraben 22, 4100 Duisberg 17, F.R.G.

16-20, FRANKFURT, F.R.G.
Expolingua 88. Germany's first specialist exhibition for languages. A congress is being held in conjunction with the exhibition on how the disappearance of European trade barriers in 1992 will affect language learning. Info: Karl J. Baddé, Wie und Wo Verlag GmbH, Postfach 2464, 3500 Bonn, F.R.G.

18-20, MONTEREY, CALIFORNIA, U.S.A.
American Council on the Teaching of Foreign Languages, annual conference. Monterey Conference Center. Info: C. Edward Scebold, P.O. Box 408, Hastings-on-Hudson, NY 10706, USA. Tel: (914) 478 2011.

24-25, TOKYO, JAPAN
International Symposium on Electronic Dictionaries. Sessions proposed include Current Status of Dictionary Development, Electronic Dictionaries for Machine Translation, and the Impact of Electronic Dictionaries. Info: Inter Group Co. (ISED 88), Akasaka Yamakatsu Bldg 8-5-32 Akasaka, Minato-ku, Tokyo 107, Japan.

28-30, BAGHDAD, IRAQ
Arab Translators' Conference. Topics to include translation and the emergence of civilization; institutes of translation in Andalusia and their impact on the European civilization; the history of translation in the Arab homeland (from the Abbasid age to the present day); the importance of translating the Arabic traditional masterpieces; the translation of significant foreign works into Arabic; bibliography of translated books and other articles; the associations and societies of translators in the Arab homeland (their programs, activities, etc.), and translation and development. Papers to be presented in Arabic or, exceptionally, in one of the following: English, French, German, Spanish. Info: M. Al-Kharaji, Chairman of the Preparatory Committee, P. O. Box 46022, Al-Mustansiriyah University, Baghdad, Iraq.

DECEMBER, 1988

17-22, NEW DELHI, INDIA
Fourth World Assembly of Departments of French. Theme: L'université face au développement, to be held at the Jawaharlal Nehru University.

JANUARY, 1989

1-6, PARIS, FRANCE
Expolangues, 7th Salon International des Langues, des Cultures, de la Communication et de l'Edition. Pte de Versailles. Info: O.I.P./C.I.C., 62 rue de Miromesnil, 75008 Paris, France. Tel: +33 (1) 45 62 84 58.

19-20, PARIS, FRANCE
La Terminologie et les Industries de la Langue, colloque international, organized by the French Centre de Terminologie et de Néologie and the Agence de Coopération Culturelle et Technique. Themes: Terminology and Linguistic Information Science; Terminology and Computer-Assisted Translation; and Terminology and Dictionaries. Info: Centre de Terminologie et de Néologie, 77 rue Damesme, 75013 Paris, France.

MARCH, 1989

28-APRIL 1, COLORADO SPRINGS, CO., U.S.A.
Annual International CALICO (Computer Assisted Language Learning and Instruction Consortium) Symposium. United States Air Force Academy. Theme: Computers and Language Learning. Info: CALICO, 3078 JKHB, BYU, Provo, UT 84602, U.S.A. Tel: +1 (801) 378 7079.

APRIL, 1989

1-2, MANCHESTER, U.K.
JCLA (Joint Council of Language Associations) International Conference, to be held at the University of Manchester Institute of Science and Technology (UMIST). Info: JCLA, Marton, Rugby, CV23 9RY, U.K.

7-9, LONDON, U.K.
Third International Conference of the Society for Effective Affective Learning (SEAL) entitled The Inner Game of Learning. Approximately 35 speakers from countries including the U.S.A., Hungary, East and West Germany, France, and Finland will make presentations. Info: Michael Lawlor, Forge House, Kemble, Glos. GL7 6AD, U.K.

9-14, PERPIGNAN, FRANCE
Fourth Congress of the International Association of Semiotics. Info: Professor Gérard Deledalle, Place de l'Eglise, 34140 Montbazin, France.

11-15, NEW ORLEANS, LOUISIANA, U.S.A.
Conseil International d'Etudes Francophones (CIEF) World Congress. The CIEF welcomes proposals to read papers, in French or English, or to organize and chair sessions and panels relating to all French-speaking areas (including France) from colleagues worldwide and in all disciplines. The Congress will also feature receptions, a book and audio-visual materials exhibit, and various cultural events. Info: Maurice Cagnon, President, CIEF, Department of French, Montclair State College, Upper Montclair, NJ 07043, U.S.A. Tel: +1 (201) 893 4283.

15-21, THESSALONIKI, GREECE
Ninth World Congress of the International Association for Applied Linguistics. Theme: Applied Linguistics, International Understanding, and Peace Education. Info: S. Efstathiadis, P.O Box 52, Aristotle University, 45006 Thessaloniki, Greece.

18-20, AMSTERDAM, NETHERLANDS
Optical Conference (formerly called Optica). RAI Exhibition Center. Organized by Learned Information Ltd. Info: Jean L. Mulligan, Learned Information (Europe) Ltd, Woodside, Hinksey Hill, Oxford, OX1 5AU, U.K. Tel: +44 (865) 730275.

18-22, LAIE, HAWAII, U.S.A.
WHIM — World Humor and Irony Movement — Conference. Info: Margaret Baker and Jesse Crisler, Box 1964, Brigham Young University-Hawaii, Laie, Hawaii, 96762-1294, U.S.A.

19-22, URBANA, ILLINOIS, U.S.A.
20th Annual Conference on African Linguistics to be held at the University of Illinois. Info: Prof. Eyamba G. Bokamba, Department of Linguistics, 707 South Matthews Ave., University of Illinois at Urbana-Champaign, Urbana, IL 61801, U.S.A.

26-29, PARIS, FRANCE
Les Etats Généraux des Langues. International Symposium on Language Learning, organized as part of the French Revolution bi-centennial celebrations. Cité des Sciences et de l'Industrie du Parc de la Villette, Sorbonne. Themes: Teaching and Learning; the role of the Media and New Technologies; Language Policy; Languages and the Right to Work; International Cooperation and the Rights of Man. Guest speakers: Umberto Eco and Claude Hagège. Info: Association pour les Etats Généraux des Langues, 101 boulevard Raspail, 75006 Paris, France. Tel: +33 (1) 45 44 38 78.

26-30, GENEVA, SWITZERLAND
Mondolingua. International Fair for Languages and Cultures. Info: Mondolingua Geneva, 29 rue du Bourg, 1002 Lausanne, Switzerland.

28-29, LONDON, U.K.
Third International Conference of the Institute of Translation and Interpreting, Russell Hotel, London. Info: ITI, 318a Finchley Road, London NW3 4HT.

JUNE, 1989

6-10, TORONTO, CANADA
Joint International Conference of the ALLC (Association for Literary and Linguistic Computing) and the ICCH (International Center for Computing in the Humanities). First joint conference of the two major international organizations in this field. Working languages will be French and English. CALL FOR PAPERS. Info: Professor Ian Lancashire, ALLC-ICCH Conference, Centre for Computing in the Humanities, University of Toronto, Toronto, Ontario, Canada, M5S 1A5. Tel: +1 (416) 978-4738.

13-15, LONDON, U.K.
The Language Show, first major UK exhibition of language training, services, equipment, and facilities for business, Barbican Exhibition Centre, London. Info: Project Presentations Limited, Victoria House, Vernon Place, London WC1B 4DH.

20-24, LEEUWARDEN, NETHERLANDS
Fourth International Conference on Minority Languages, Fryske Academy, Leeuwarden. Theme: Comparative Research on Minority Languages and Development of Theories. The conference will deal particularly, but not exclusively, with the minority languages of the Netherlands, Great Britain, Ireland and the Nordic Countries. Info: 4ICML, Fryske Academy, c/o Durk Gorter, Doelestrjitte 8, 8911 DX Leeuwarden, Netherlands.

AUGUST, 1989

16-18, MUNICH, F.R.G.
MT Summit II, Hotel Bayerischer Hof, organized by the West German Association for Documentation. Big line-up of representatives from both industry — Gachot, Logos, Fujitsu, Hitachi, Toshiba, IBM, Philips, Eurotra — and academe — Kyoto, Hildesheim, Beijing, Carnegie Mellon, et al. Speakers to include M. Nagao, Muriel Vasconcellos, Jan Landsbergen, and Maghi King. Info: MT Summit II, c/o Mrs. H. Strohl-Goebel, Deutsche Gesellschaft für Dokumentation e.V., Westendstr. 19, 6000 Frankfurt am Main 1, F.R.G.

20-26, DETROIT, MICHIGAN, U.S.A.
IJCAI'89, the premier forum for international scientific exchange and presentation in AI research, sponsored by the International Joint Conferences on Artificial Intelligence Inc. PAPERS ARE INVITED and should be postmarked by 12 December 1988. Info: Dr. N.S. Sridharan, FMC Corp., Central Engineering Labs., 1205 Coleman Ave., Box 580, Santa Clara, CA 95052, U.S.A. Tel: +1 (408) 289 0315.

NOVEMBER, 1989

1-3, WASHINGTON D.C., U.S.A.
30th Annual Conference of the American Translators' Association. Info: ATA, 109 Croton Avenue, Ossining, NY 10562, U.S.A.

23-24, NOTTINGHAM, U.K.
International Association for Language and Business, 15th Annual Conference. Theme: Corporate Language Policy. Languages: English, French and German. Info: John D. Graham, Am Flutgraben 22, 4100 Duisburg, F.R.G.

JULY, 1990

21-26, HARROGATE, U.K.
Conference on Computer-Assisted Language Learning and the Use of Computers in the Humanities to be held at the Fourth World Congress for Soviet and East European Studies. Info: Dr. J.I. Press, School of European Languages and Literature, Queen Mary College (University of London), Mile End Road, London E1 4NS, U.K., and Prof. S. Pugh, Chairman, Slavic Languages and Literatures, Duke University, Durham, North Carolina 27706, U.S.A.

AUGUST, 1991

10-14, PECS, HUNGARY
17th FIPLV World Congress. Theme: Modern Language Learning for Adults - 1990s and Beyond. Info: P. Bassel, National Center for Foreign Language Teaching of T.I.T., XI. Bocskai út 37, 1113 Budapest, Hungary.

CYBERLEX

This month's excerpt comes from the ever-quotable Lewis Carroll and his ever-delightful Alice in Wonderland. It was submitted by Jan Grootenhuis of the Centrum for Informatica and Consultancy Europa (Circe) in Amsterdam. As ever, readers are invited to submit their own suggestions for inclusion in CyberLex, language technology in action.

"Impenetrability! That's what I say!"

"Would you tell me, please," said Alice, "what that means?"

"Now you talk like a reasonable child," said Humpty Dumpty, looking very much pleased. "I meant by 'impenetrability' that we've had enough of that subject, and it would be just as well if you'd mention what you mean to do next, as I supposed you don't mean to stop here all the rest of your life."

"That's a great deal to make one word mean," Alice said in a thoughtful tone.

"When I make a word do a lot of work like that," said Humpty Dumpty, "I always pay it extra."

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WordWorker

AUTHOR, COLUMNIST AND CUNNING LINGUIST

Xaviera Hollander

By Jeffrey S. Mann

Xaviera Hollander has settled down, somewhat – in her own way; well, not really I guess. At least she finds her livelihood on the right side of the law now, making more money standing up than she ever did lying down.

Hollander jumped spectacularly into the limelight in 1971 when she was arrested on the evening news as "New York's foremost madame." She wrote about her brothel-keeping years in the best-selling book *The Happy Hooker*, co-authored with Robin Moore (of *The Green Berets* and *The French Connection*). This widely-translated book made her an international celebrity.

Currently, Hollander writes the "Call Me Madam" agony aunt column in *Penthouse*, in which she mostly seems to be called on to make a judgment about what is "normal" for all kinds of combinations. She also has a telephone sex line where she does her best to convince heavy-breathers to talk about their feelings and attitudes about sex. She's also active as a lecturer, and fills in the rest of her time writing books about her semi-fictitious adventures.

Hollander splits her time between Amsterdam and her home in Marbella, Spain. Since her arrest, she has been persona non grata in the United States either as Xaviera Hollander or Vera de Vries (her real name). Her home is usually abuzz with visiting friends, acquaintances. It functions similar to a salon for artists and writers. There's no mistaking who lives there, with the enormous portraits and many photos of herself. Salt and pepper shakers in the shape of huge penises adorn her dining room table. Used to being the center of attention, she has a paradoxically disarming ability to steer and dominate a conversation.

Her affection for gadgets, like glass-fiber and kinetic sculptures which threaten to collapse on themselves, betrays a love-hate relationship with technology. She calls for help when activating the complex compact disk player which can shuffle five disks at a time on a Lazy Susan arrangement. Her latest book is dedicated to the friend who helped tame her wordprocessor, "God's curse on the writing profession." The nickname for her PC is "the green monster."

When pressed to describe what she considers her profession – columnist, writer, counselor – Hollander compromises on "an allround hedonist, a poly-sensualist who tries to bring a certain message across to the public."

Over a dozen books ("a dirty dozen") books have appeared in her name, many in conjunction with another co-author. Most of them sport covers with women in just enough clothing to satisfy mainstream bookstores, and in poses varying from the uncomfortable to the ridiculous.

Hollander seems to be a bit wistful about her books. She deflects questions about whether she considers herself a serious writer, but clearly doesn't pretend to create great works of literature. Some of her work is purely to pay the bills and fits what people expect from the Happy Hooker. "The fiction books I don't stand behind," she says. "They're more like Harlequin or gothic romances."

She tries to sneak some real ideas into her autobiographical books, but finds it difficult. Her reputation and the expectations it brings have her trapped to a certain extent. Her readers and publishers expect a certain kind of book. It's hard to break out of the pattern, and since they pay well for it, why bother?

Sex and Xaviera Hollander are irretrievably related. Some would see that as a straitjacket, but it doesn't necessarily bother her; much of what she has to say *is* related to sex. She finds frustrating the attitude which hangs a "therefore" after that connection: that people connected with sex cannot say or think anything meatier than soft porn.

PHOTO BY DAVID CONWAY

Despite opposition from her publisher, some of her later books delve into subjects closer to her heart. One later book includes a chapter recalling her feelings about the death of her father. She received over 500 letters from readers about that chapter. Ironically, the book's title is *Xaviera Goes Wild*, hardly a title suggesting existential musings about death.

The Happy Hooker image is generally hard to shake. On the telephone sex line she hosts, Hollander quickly got bored with the men who called looking for two-minute satiation. She noticed that most of them seemed to have real problems – be it with booze, maturity, over-reliance on work or sports. They were all lonely in differing ways. Her programs have taken on the trappings of a therapy session, with some dirty stories mixed in to keep the quarters rolling, of course.

Hollander finds it generally hard to express her ideas fully in book form. "I haven't been able to really get the level of feeling down on paper. I need the stimulation of wordplay between two people. Emotions don't come over in the written word, so they don't come over in the books very often."

The next medium for her message is a talk show on Dutch television. Its format will have debts to the Dame Edna Experience, Dr. Ruth Westheimer and Phil Donahue. "I'm doing this talk show, to prove that I'm more than an ex-whore who's making a lot of money."

Hollander often comes across much better in person, once her reputation can be forgotten. In a recent program on Dutch television where aspiring young journalists competed to see who could get the best interview, the panel of judges were visibly surprised that she could put more than two words together. Her interviewer won the prize, too.

"Sometimes when I get interviewed on a talk show, people warn me that I'm not allowed to use words like 'fuck' and 'suck.' I don't need to do that. My power lies in wordplay, the double entendre. I've discovered the best four-letter word for intercourse is 'talk.' I got a good reaction on a talk show by saying that sex is between the ears, not *just* between the legs." Puns and suggestive jokes pepper her speech: "What's the worst thing you can get from telephone sex – Hearing AIDS."

She is currently struggling to get a visa to visit the United States in order to do interviews. "My books don't sell there anymore because I can't do talk shows." No luck yet, despite legal fights and assurances that she's not active in prostitution anymore; that she's become "an upright citizen — no longer a horizontal one."

She looks forward to the eventual trip with the zeal of a missionary. "If ever there's a country that needs Xaviera Hollander right now, it's the United States." The latest edition of her most famous book concludes, "The world after the *Happy Hooker* was much freer and less prudish… But the pendulum has swung back, and the hounds of Puritanism are once more baying for blood." She condemns the general spirit of "hypocrisy and persecution" which she detects, and Edwin Meese's commission on pornography, in particular. Wouldn't THAT make a great talk show lineup!

Jeffrey Mann *is a technical writer and consultant living in Amsterdam. One of the first books he recalls reading all the way through was a purloined copy of The Happy Hooker at the age of 13. At that time it was educational.*

Language Technology

Finally, a Magazine for People Who Use Computers to Crunch Words, Not Numbers.

Time was when the only thing you did with a computer was crunch numbers. These days though it's more likely you're using one to crunch words. The use of high technology to work with words has come a long way since 1971, when the Wang 1200, the first dedicated wordprocessor, made its debut as the new-fangled alternative to the electric typewriter. Up to now, however, keeping track of the latest products and laboratory trends in the high-tech language industries hasn't been easy. Most computer publications are still full of number – not word – crunching. That's why we created Language Technology.

Beyond Spreadsheets

Of course, heavy-duty number crunchers have a well-deserved place of honor in the Digital Hall of Fame. But what more and more people now want to do with their computers is process *not* numbers – but *words*. Futurologist Alvin Toffler has estimated that the volume of printed information is doubling every three years. For public institutions, commercial organizations, and individuals alike in our evermore complex world, the capacity to process human language is in more and more urgent demand.

This demand has brought with it a whole new generation of computer tools designed to shape, spread and acquire word-based data. Since wordprocessors, we've had spellcheckers, electronic thesauri, and style checkers. Now, intelligent grammar checkers are on their way.

The demand to improve text presentation has given us desktop publishing. And the need to input non-electronic text has spawned scanners and optical character recognition (OCR) software.

Meanwhile, RAM resident look-up engines and CD-ROM disks have opened up vast arsenals of reference data to the stand-alone micro user. And now, more and more wordworkers are hooking their modems to data communications networks, both to spread and acquire ever vaster volumes of information.

Even machine translation – long scorned as gimmickry in the linguists' inner sanctum – is now turning into a commercial reality. And demand is bound to boom, as our global village's translation burden gets heavier and heavier. By one estimate, worldwide translation costs are a staggering $24 billion – and growing 20 percent a year.

The promise of the future is of machines that will be capable of understanding *and* generating both spoken and written language. Voice synthesis modules are already a reality, enabling – among others – the visually handicapped to input computer data without need of a keyboard.

Wordworkers

But Language Technology is about more than just products and research trends. It's also about the worldwide community of people who work with words – and a fascinating, many-facetted community they are.

People like Alan Kay, computer visionary and inventor of the graphic interface that made Apple's Macintosh the best selling computer in America. This is what he told LT's editor about innovation: "Nobody had a copying problem until the Xerox machine came along, and then all of a sudden everybody had a copying problem. The big hitter inventions of the 20th century created a need only they could fulfill."

And Jef Raskin, who has developed a revolutionary wordprocessor that allows users to begin typing without having to access an operating system. He told LT: "An operating system is a problem you have to hassle with before you hassle with the application."

Maghi King, the doyenne of the machine translation community and head of Geneva's Institute for Semantic and Cognitive Studies, informed us: "The Japanese have taken the lead in machine translation – because they're not afraid of investing in long-term research."

And David Bunnell, publisher and editor-in-chief of three of the world's most widely read magazines in personal computing – PC World, MacWorld and Publish! – said recently in LT: "The future belongs to electronic media – paper will be used for napkins, toilet paper and paper cups."

Tim Leary, one-time psychedelic guru, is now head of the Futique software house, whose maiden product is a psychological self-help program called Mind Mirror. He told LT's US West Coast correspondent: "The ultimate act of intimacy in the Information Age is not going to bed with someone. It's 'I'll show you my personal database.'"

Spreadsheets are old hat.

The technologies covered by Language Technlogy are some of the most avant garde – and most crucial – in computing. In the past 12 months, LT has written about:

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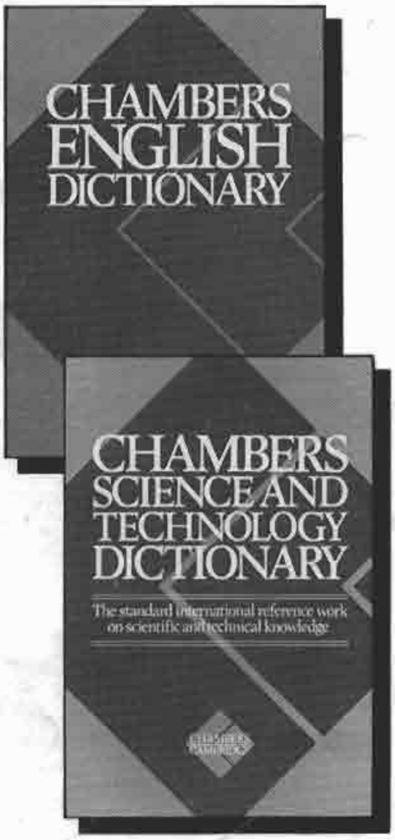

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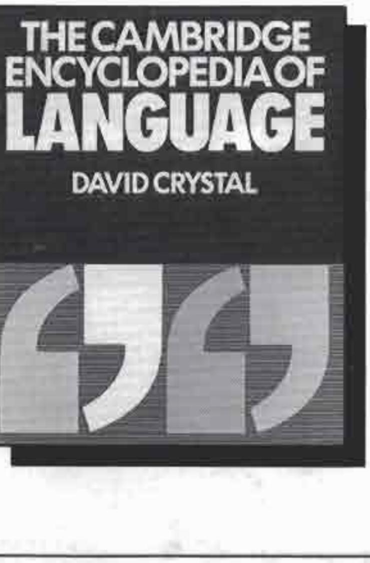

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